

ASVIN STEAM TRAP

for steam application

ASVIN INDUSTRIAL VALVES AND INSTRUMENTS are one of the leading manufacturers of industrial valves and Boiler Instruments for critical Steam applications in power. Established in 1983, over the years, ASVIN has earned the reputation for excellence as a major supplier of Boiler products. ASVIN has pioneered many innovative valve designs, emphasizing quality, safety, ease of operation, simple in-line maintenance and long cycle life. ASVIN produces Steam Trap from 1995 in addition with Plenty of other Steam Products. This comprehensive range of Steam Traps are based on a unique design that was developed. ASVIN supply high quality Steam Traps for virtually all condensate drainage applications.

ASVIN Steam Traps are installed in the steam lines to trap and remove steam condensate. A steam trap is a device that automatically senses the difference between steam, non-condensable gases and condensate. ASVIN Trap assures retention of steam within the system, while removing condensate and non-condensable.

End Connection : Screwed / Socket Weld / Flanged / Butt Weld
 Standard : NPT / BSPT / BSP / ANSI / BS / IS / DIN
 Material : Forged / Casting / CS / WCB / SS / Alloy
 Product Standard : ISO 6948 / 6554 / 6704 / 7841 BS 5500 / ASME VIII

Mechanical ASVIN Traps operate by using the difference in density between steam and condensate. A float within the trap detects the variance in weight between a gas and a liquid.

Mechanical ASVIN Steam Traps include **Ball Float Steam Traps, Inverted Bucket Steam Traps and Float & Thermostatic Trap.**

Thermostatic ASVIN Traps detect the variation in temperature between steam and condensate at the same pressure. The sensing device operates the valve in response to changes in the condensate temperature and pressure. A Thermostatic Trap will pass condensate when this lower temperature is sensed. As steam reaches the Trap, the temperature increases and the Trap close. The **Bimetallic Trap** operates on the temperature principle using two layers of metallic elements, each with different expansion coefficients.

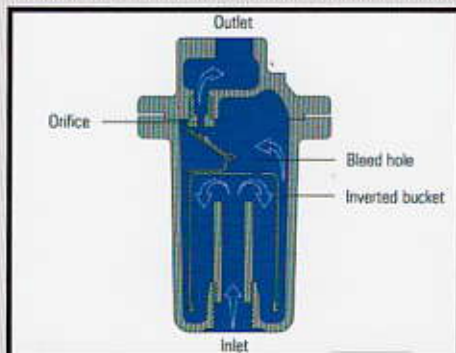
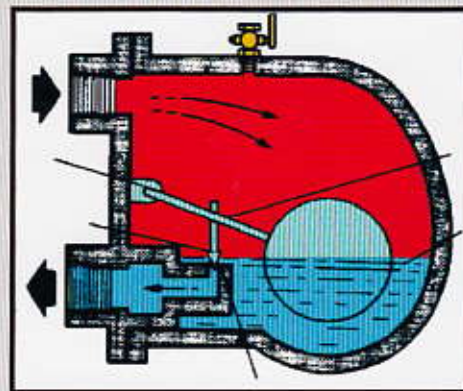
Thermodynamic ASVIN Traps use volumetric and pressure differences that occur when water changes state into gas. **Thermodynamic Disc Stream Trap and Thermodynamic Orifice** are two types of Thermodynamic **ASVIN Steam Trap.**

ASVIN Popular Steam Traps in these categories include Ball float, inverted bucket, Bimetallic and Thermodynamic disc steam traps.

As far as Air Venting is concerned, ASVIN Thermostatic Steam Traps are more advantageous compared to other types because they are fully open during start-up.

ASVIN Ball Float Steam Trap

As condensate reaches the Trap, the float is raised and the lever mechanism opens the main valve. When steam arrives, the float drops and closes off the main valve, which remains at all times below the water level, ensuring that live steam cannot be passed.

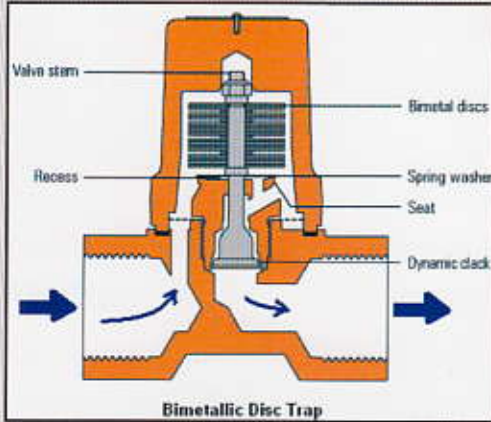


ASVIN Inverted bucket Steam Trap

Mechanism consists of an inverted bucket which is attached by a lever to a valve. Bucket hangs down, pulling the valve off its seat. Condensate flows under the bottom of the bucket filling the body and flowing away through the outlet. The arrival of steam causes the bucket to become buoyant, and it then rises and shuts the outlet. The trap remains shut until the steam in the bucket has condensed or bubbled through the vent hole to the top of the trap. It will then sink, pulling the main valve off its seat. Accumulated condensate is released, and the cycle repeats.

ASVIN Float & Thermostatic Steam Traps

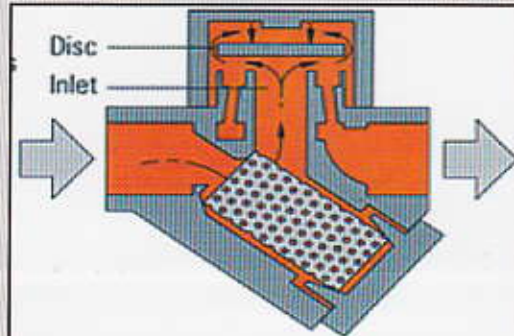
A water seal formed by the condensate prevents live steam loss. Since the discharge valve is under water, it is not capable of venting air and non-condensables. When the accumulation of air and non-condensable gases causes a significant temperature drop, a thermostatic air vent in the top of the trap discharges them. The Thermostatic Vent opens at a temperature a few degrees below saturation, so it's able to handle a large volume of air through an entirely separate orifice-but at a slightly reduced temperature.



ASVIN Bi Metallic Steam Trap

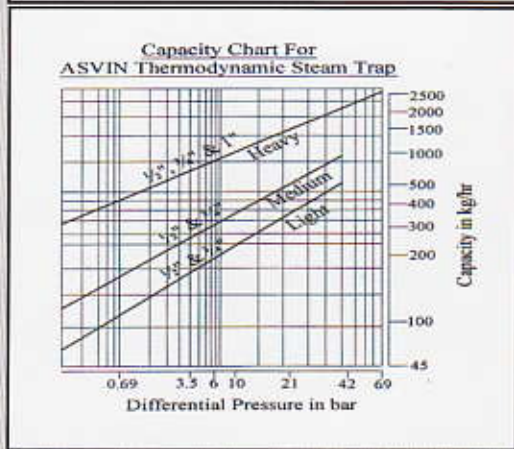
The Bi-metallic Steam Traps operate under the principle of thermal expansion of metals. Two dissimilar metals are joined into a series of discs and upon heating will deflect to provide movement to close off the valve. These Traps are primarily used in steam tracing because of their ability to adjust condensate discharge temperature which may be desirable on certain tracing applications. When cold condensate and air are present, the bimetallic Trap remains open as the flow of air and condensate discharges from the system. When steam arrives to the Trap, the discs deflect and pushes the plug onto the seat. The temperature at which the valve closes can be adjusted by turning a set screw

ASVIN Thermodynamic Steam Traps (Disc) basically rely on the principle of formation of flash steam from condensate. Flash steam is the natural phenomenon occurring when hot condensate flows from a high pressure point to a low pressure point. As a result, a portion of the liquid boils and a mixture of steam and water are produced. During start-up, incoming condensate pressure lifts the disc and cool condensate together with air is discharged.



ASVIN Thermodynamic Steam Trap

As the temperature of the condensate rises, hot condensate flows through the disc. Consequently, its pressure is reduced and flash steam is produced. This high velocity steam creates a low pressure area under the disc, forcing it downwards. At the same time, the flash steam pressure inside the chamber above the disc increases, pushing also the disc down against the incoming condensate. At this point, the flash steam is trapped in the upper chamber, and the pressure above the disc equals the pressure below the disc.

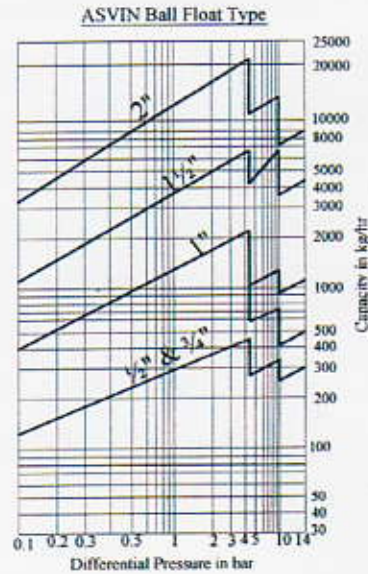
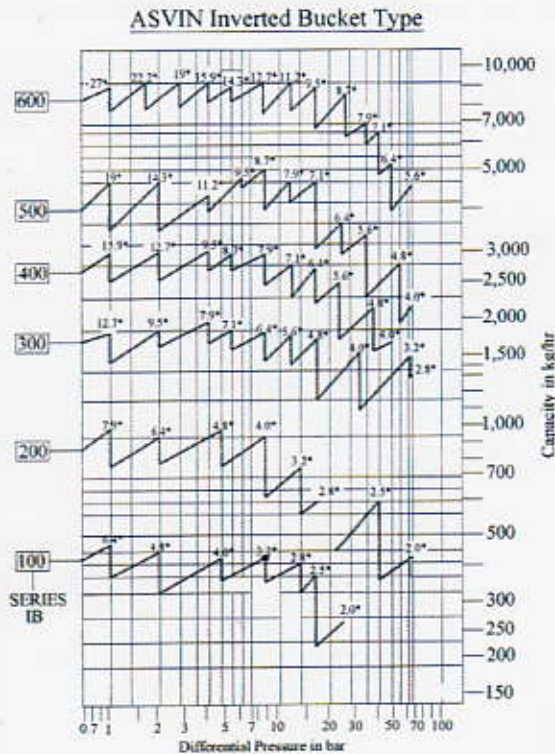


Face to Face Distances (Approximate in millimetres - given for reference only)

SIZE	Inverted Bucket -Vertical		Thermodynamic			Ball Float	
	SCR/SW	FLG	SCR/SW	BW	FLG	SCR/SW	FLG
1/2"	168	200	78	110	159	120	150
3/4"	200	235	78	110	159	120	150
1"	268	300	84	110	159	120	160
1 1/2"	395	445	-	-	-	200	230
2"	450	495	-	-	-	200	230

SCR - Screwed ends, SW - Socket weld ends, FLG - Flanged ends, BW - Butt weld ends.

Capacity Chart For ASVIN Steam Trap



IB Series	100	200	300	400	500	600
Size	1/2"	1/2" & 3/4"	1/2", 3/4" & 1"	3/4" & 1"	1", 1 1/4" & 1 1/2"	1 1/2" & 2"

NOTE: Orifice Sizes * are given in mm inside the chart
Capacity shown above is based on discharge at saturation temperature.
When discharge sub-cooled condensate the air vent provides extra capacity

ASVIN - Range of Products

VALVES

- * SAFETY / PRESSURE RELIEF VALVES
- * THERMAL RELIEF VALVE
- * ATMOSPHERIC RELIEF VALVE
- * PRESSURE REDUCING VALVE / STATION
- * PRESSURE CUM VACUUM RELIEF VALVES
- * BREATHER VALVES
- * EXCESS FLOW CHECK VALVES / SHUT OFF VALVES
- * UNDERGROUND SAFETY VALVES FOR WATER TANK/
WATER FLOW CANAL AS PER BS - 4558 : 1983
- * NON - RETURN VALVES / BALL VALVES
- * NEEDLE VALVES / MANIFOLDS / THROTTLING VALVES
- * FLUSH BOTTOM VALVES

TANK EQUIPMENTS

- * TANK BLANKETING VALVES
- * EMERGENCY PRESSURE RELIEF VALVES (Air Vent)
- * GAUGE HATCHES (Lock Down / Spring Loaded)
- * VACUUM BREAKERS

INSTRUMENTS

- * LEVEL GAUGES (Tubular / Reflex / Transparent)
- * LEVEL INDICATORS (Magnetic / Float & Chord)
- * FLOW - ELEMENTS (Orifice / Flow Nozzles / Venturies)
- * ROTAMETER (BY-PASS / ONLINE)
- * MANOMETERS
- * LEVEL SWITCHES
- * THERMOWELLS
- * CONDENSING POT
- * CONSTANT HEAD CHAMBER
- * AIR / MOISTURE SEPARATOR

PIPELINE EQUIPMENTS

- * STEAM TRAPS / AIR TRAPS
- * STRAINERS ('T' / 'Y' / Basket / Simplex / Duplex type)
- * FLAME / DETONATION ARRESTERS
- * SIGHT GLASSES (Full view / Double window /
Flapper / Rotating Wheel)
- * RUPTURE DISC

Available with all reputed Third party Inspection Agencies, Viz,
ABS, BHEL, Bax Council, Bureau Veritas, Controller of Explosives, DNV, EIL, IBR, IRS, Lloyds,
MECON, NPC, RITES, SGS, TPL, CE marking etc.,

ASIAN INDUSTRIAL VALVES AND INSTRUMENTS



A18/1, Industrial Area,
Mogappair East,
Chennai - 600 037. India.
www.asianindustrialvalves.com
www.asianvalves.net
www.asianvalves.co.in
www.asianvalves.in

Phone : 044 - 2656 5370, 5371, 5372
Mktg. : 044 - 6517 2940
Fax : +91 - 44 - 2656 5930, 5910
E-mail : asianvalves@asianvalves.net
sales@asianvalves.net
rajanms@asianvalves.net
info@asianvalves.net

