High efficiency and energy-saving due to reliable performance

The pilot inverted bucket trap uses the differential pressure principle to open the main valve seat, achieving high discharge capacity with a compact size.

・Closed State

The bucket fills with steam and floats upward due to buoyancy, closing the main and secondary valve seats and cutting off the condensate discharge path, keeping the valve in a closed state.

・Secondary Valve Opening

As condensate flows in, the steam inside the bucket condenses into water or escapes through the exhaust hole, reducing the buoyancy of the bucket. The bucket sinks, causing the secondary valve to open the secondary valve seat, placing the valve in a low-discharge drainage state.

・Main Valve Opening

As condensate continues to flow in, the bucket and secondary valve continue to sink until the lower end of the secondary valve closes the reverse sealing valve seat. At this point, a pressure difference forms above and below the main valve, causing it to descend and open the main valve seat, allowing condensate to discharge through the main valve seat and placing the valve in a high-discharge drainage state.

Wear resistance and corrosion resistance

The valve core and seat experience minimal or no single-sided wear. By reducing the closing force required to maintain a seal, internal part wear is minimized. The closing components are made of stainless steel, enhancing corrosion resistance.

SCCV and Pilot Structure

The valve core is closed using the adhesion force of discharging condensate and internal pressure within the valve, preventing rigid impact.

The secondary valve opens to guide the main valve to open, transitioning from low to high discharge capacity for drainage.

Continuous Discharge of Air and Non-Condensable Gases

The exhaust hole at the top of the inverted bucket continuously discharges air and other non-condensable gases, preventing steam lock.

No steam leakage

The dual steam-water separation mechanism (through the channel design and inverted bucket principle) ensures effective steam-water separation, preventing steam carryover and leakage.

Built-in filter

It effectively blocks impurities from entering the valve chamber, ensuring reliable operation of the trap.

Easy inspection

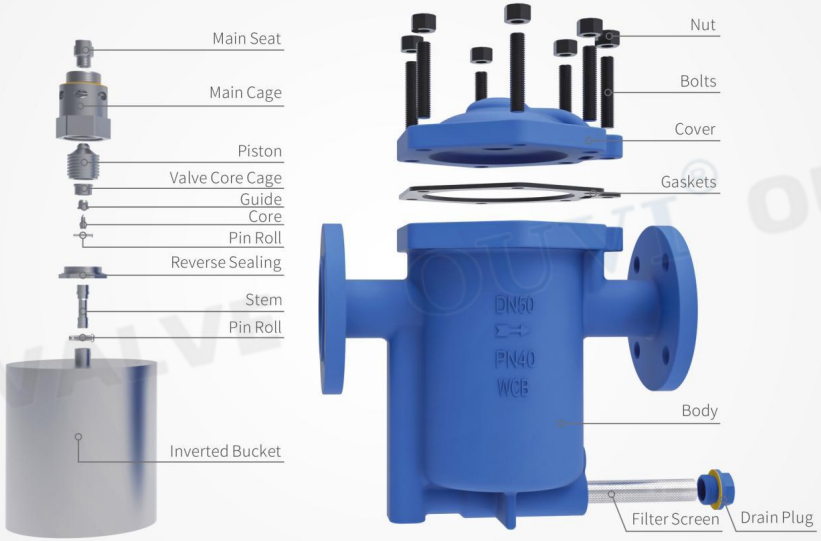
The intermittent discharge action is an important indication of the proper functioning of the inverted bucket steam trap.

Water hammer resistance

The open bucket will not be damaged or flattened by water hammer.

High Backpressure Resistance

The operation of the trap is controlled by the density difference between steam and condensate, ensuring reliable performance.



Pilot Mechanism and SCCV Closing System