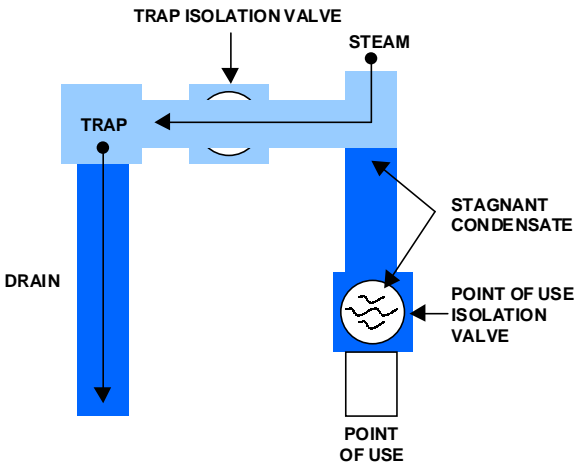




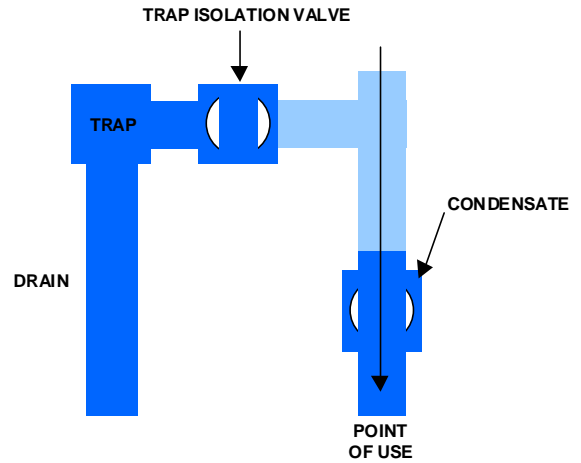
# Creative Solutions . . . PURE STEAM TRAP VALVE SOLVES CONDENSATE PROBLEMS

## Problem

Stagnant condensate can promote bacteria growth and cause considerable damage to high-purity products.



When steam is in use, the point of use valve becomes cold from condensate buildup. Ideal conditions exist for bacterial growth.



Once the valve is opened, cold condensate drains into the equipment before the pure steam, contaminating the sample. Bacteria may be killed, but pyrogens can still remain.

## Solution

PBM's Pure Steam Trap Valve incorporates the features of PBM's Clean Steam valve along with a side body purge port and ball purge holes that direct condensate flow to the trap while shutting off flow downstream. Ball purge holes are small holes drilled under the surface where the seat contacts the ball. These holes allow steam and condensate to pass under the seat and into the steam trap.

*Using one valve to perform three functions, when some other assemblies require two valves, saves space and cost. More importantly, it significantly reduces deadleg piping where condensate can cool and become contaminated.*

The Pure Steam Trap Valve also features PBM's True-Bore® design, with the I.D. of the ball, seats and end fittings identical to the I.D. of the tubing. This minimizes pockets and dead space in the through path, and prevents puddling where contamination could occur. The True-Bore design eliminates pressure drops caused when media flows from tubing through a reduced port or a larger-ported ball valve.

The Pure Steam Trap Valve serves three main purposes:

- Allows the steam valve to open without the initial rush of water that is usually experienced
- Permits sampling of steam for purity
- Safely isolates trap for ease of maintenance

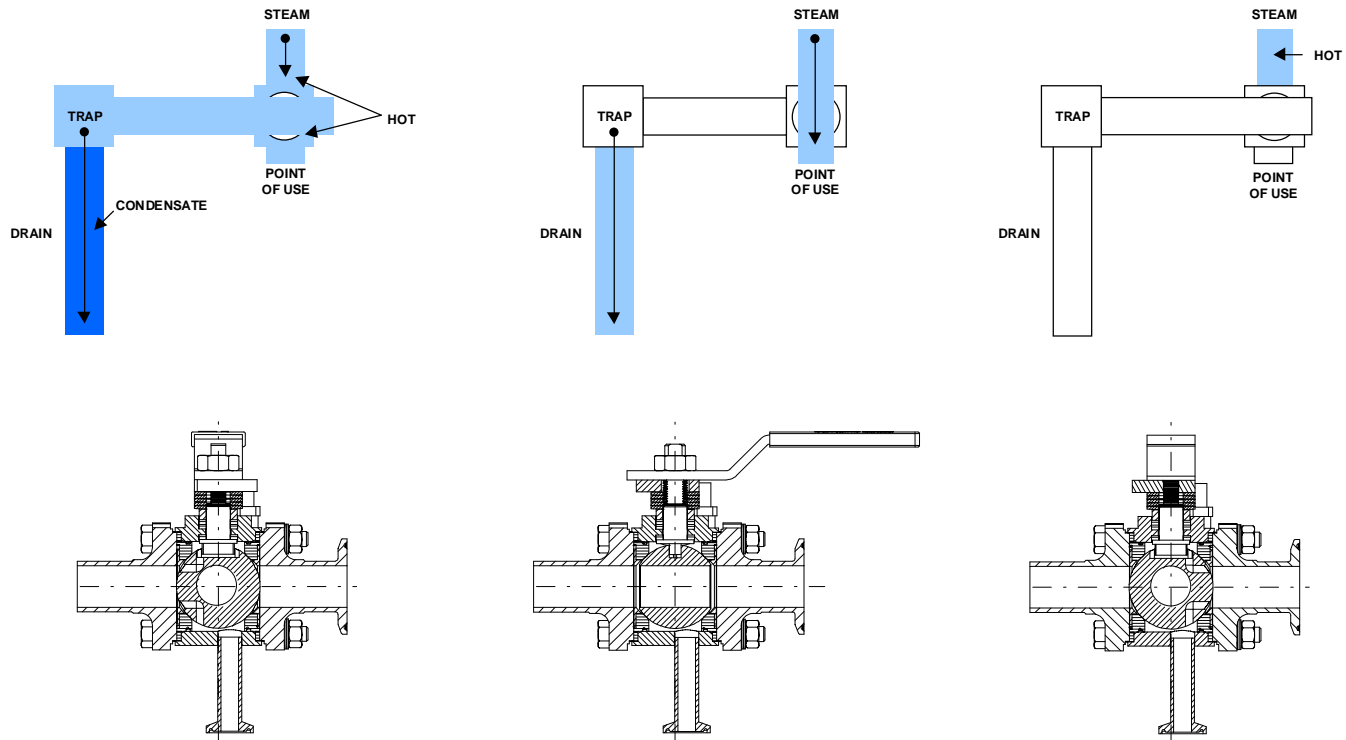
The Pure Steam Trap Valve can also be configured for horizontal installation. PBM will custom-design the location of the purge port at the lowest point in the center body to minimize condensation collecting in the valve.

The Pure Steam Trap Valve is also available for Direct Mount Actuation for two- or three-position operation.

*Please turn to side 2...*

# PURE STEAM TRAP VALVE SOLVES CONDENSATE PROBLEMS

Solution, cont.



The **Closed Position** allows condensate to flow past the ball purge holes during normal operation. Condensate flows past the purge holes in the ball and out the side port of the valve to the steam trap, allowing the body cavity to remain hot. The point-of-use, or sampling connection, is isolated by the surface of the ball without the purge holes.

The **Open Position** allows the flow of steam. Appropriate sampling piping or equipment connections are made at the point-of-use port, and the ball is turned 90° counterclockwise, opening the valve. The trap is isolated from flow allowing full sterilization temperature to be quickly reached. The valve is then turned 90° clockwise to return the steam trap to service in the "Closed" position.

The **Trap Isolated Position** allows steam trap maintenance by turning the ball 180° counterclockwise from the normal "Closed" position to the "Trap Isolated" position. As the ball is closed toward the steam-in port, it isolates the steam trap. Maintenance can then be performed on the steam trap. To return the trap to service, the ball is turned 180° clockwise to the "Closed" position.

## Benefits

- Significantly reduces deadleg piping where condensate can cool and become contaminated
- Permits sampling of steam for purity
- Safely isolates trap for ease of maintenance
- Reduced valve and piping costs