ADCA Mat

PRESSURE OPERATED PUMPS AND PUMP TRAPS

VALSTEAM ADCA®

valsteam.com

PUMPS AND PUMP TRAPS COMPLETE RANGE

MECHANICAL PUMP 101

A mechanical pump consists of a body shell, into which condensation flows by gravity. The body contains a float mechanism, which operates a set of changeover valves, allowing the transfer of the liquid to a higher elevation or pressure.
The pump can be operated by steam, compressed air or gas and can be used for lifting any kind of no corrosive liquids.

ADCAMAT POP (PRESSURE OPERATED PUMP) FUNCTIONING

1. Liquid flows by gravity into the pump through an inlet check valve lifting a float.

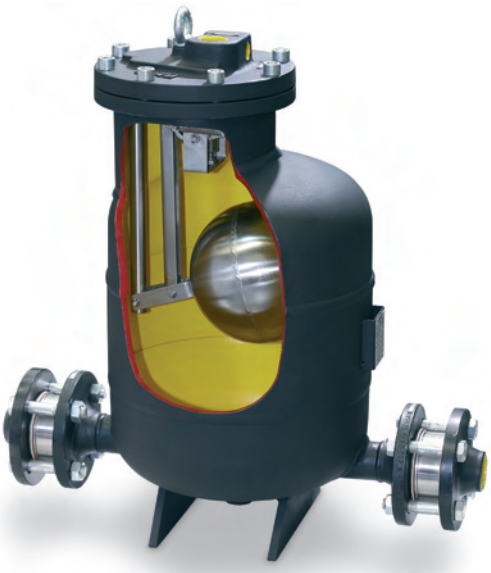
2. At the upper limit it opens the supply valve, allowing the steam or compressed air to enter in the pump body.

3. The pressure in the pump builds up just enough to overcome back pressure.

4. The pressurized liquid opens the outlet check valve and the discharge starts. (The liquid discharged may be quantified through a special counter, enabling the pump to function as a reliable flow meter).

5. When the float reaches the minimum lower level it closes the steam or compressed air supply valve and opens the vent, allowing the liquid to fill the pump again.

ADCAMAT POP-S CARBON STEEL CONSTRUCTION PUMP DN25 TO DN80



ADCAMAT POP-SS STAINLESS STEEL CONSTRUCTION PUMP DN25 TO DN80

PACKAGED ADCAMAT PUMP SIMPLE, DUPLEX & TRIPLEX UNITS

PPT. PRESSURE PUMP TRAP WORKING CYCLE

ADCAMAT POP-S DN100 PUMP

ADCAMAT APST-S / APST-SS PRESSURE PUMP TRAP

ADCAMAT POP-LC LOW CAPACITY PUMP DN25 AND DN40

ADCAMAT PPT PRESSURE PUMP TRAP

1. The ball float mechanism and the motive steam valve start closed, while the exhaust valve is open.
The float controls the steam trap valve and the steam motive pressure valve.
Condensate starts to flow to the pump trap at the same time.

2. The PPT is operating as a steam trap, modulating the condensate discharge as it is formed.
The motive steam valve remains closed and the exhaust valve open.

3. As soon as the equipment control valve starts to modulate, the steam pressure will decrease and consequently the differential pressure starts to be lower, decreasing the PPT steam trap discharge capacity.
The condensate level inside the pump is now increasing.

4. If this situation goes on, the condensate shall flood the equipment, causing problems. But by using a PPT at this stage, the snap action pump mechanism will close the exhaust valve and open the steam one, allowing the external motive steam to replace the necessary positive pressure, pumping back the condensate.

5. The PPT is now pumping the condensate back to the return system. The condensate level falls and replaces in operation the steam trap mechanism.

6. The motive steam valve closes and the exhaust opens, equalizing the inside pump pressure with the condensate inlet, and thus the condensate flows again to the PPT. With enough differential pressure the system re-starts as a steam trap or, otherwise, as a pump.

PRODUCTS MANUFACTURED
IN PORTUGAL

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Valsteam ADCA is a full service manufacturer of steam & fluid systems equipment based in Portugal. We deliver groundbreaking solutions to practically all kinds of industries, in more than 80 countries from the 5 continents.

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