## Effective condensate management is key to energy savings in steam systems

In a steam system, efficient condensate management allows optimal energy recovery and is crucial for ensuring plant efficiency and improving product quality. Condensate Management Involves Two Key Issues:

### Recovering Condensate

When condensate is discharged through a trap, it retains 20% of the total thermal energy of the steam.
Recovering this high-value resource can save:

- Thermal energy, reducing fuel consumption
- Costly chemical water treatment expenses
- Expensive feedwater fees
- Boiler blowdown requirements

### Drain the condensed water

Efficient removal of condensate from heat exchangers and process equipment is essential for equipment stability, efficiency, and longevity. Effective condensate removal can prevent:

- Unstable temperature control
- Water hammer
- Product quality problems
- Noise
- Excessive corrosion of heating surfaces
- Equipment damage

# Condensate Recovery Pump-Types and Primary Applications

## What is a Condensate Recovery Pump

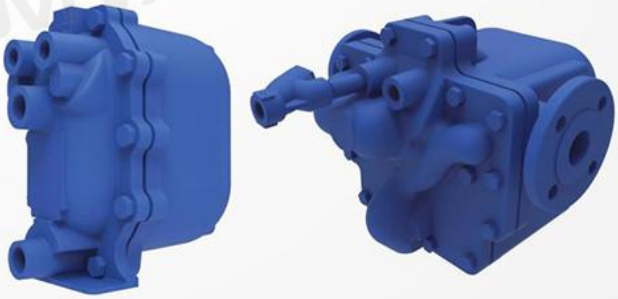
A condensate recovery pump is a mechanical pump that uses steam or compressed air as the driving pressure source to discharge condensate. It requires no electrical equipment, eliminating concerns about cavitation, which can occur when using electric pumps.

## What is an Automatic Trap Pump

An automatic trap pump is a condensate discharge device based on a float-type trap with an added pump function (for condensate recovery). This device incorporates a drive pressure to facilitate condensate recovery.

Primarily used in open systems

Primarily used for closed systems



## For the following purposes

- Recovering condensate for energy-saving and emission-reduction purposes
- Preventing condensate retention in heat exchangers and similar equipment
  - Prevents corrosion
  - Prevents water hammer
  - Prevents uneven heating
- Prevents water hammer in the condensate recovery pipeline
- Increases the efficiency of steam-using equipment

When only simple piping is used to recover condensate, the following issues may arise. Insufficient discharge capacity of the trap due to pressure differences affected by backpressure. Or water hammer in condensate recovery piping caused by flash steam. Using an APT series automatic trap pump or an MFP series condensate recovery pump can maintain current production efficiency while preventing water hammer and condensate retention.