

MECHANICAL CONDENSATE RECOVERY UNITS



Designed and made
as per
GERMAN Standard

MECHANICAL CONDENSATE RECOVERY UNITS

The significance of recovering condensate

- Reduce water treatment costs.
- Reduce water usage and costs.
- Reduce boiler blowdown and save fuel.
- Avoid the cost of high temperature discharge of sewage.
- Recovering condensed water means recovering a large amount of heat energy, saving energy consumption and reducing usage costs.

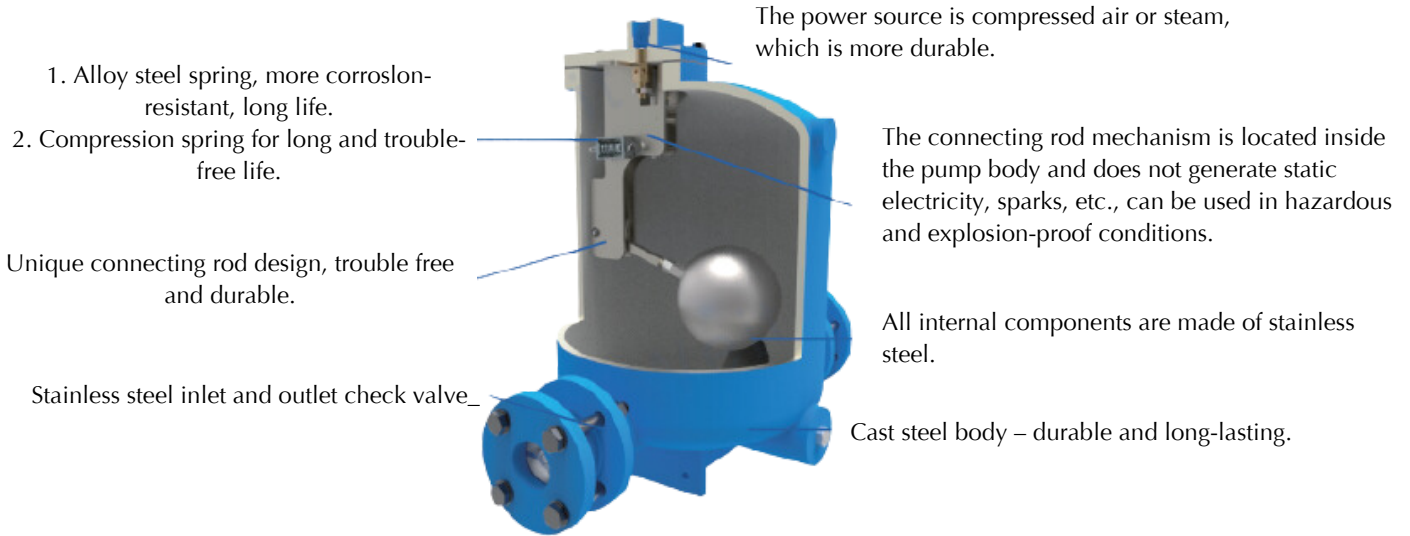
Solutions for condensate recovery

- Traditional solution: Combination of water tank and electric pump.
- Mechanical Condensate Recovery Unit.

MECHANICAL CONDENSATE RECOVERY SOLUTION VS TRADITIONAL SOLUTION

Mechanical Condensate Recovery Units	Traditional Condensate Recovery Units
NO external power source such as electricity is needed.	Requires external power – unable to work without it.
On steam or compressed air as No cavitation problems,	There is cavitation – the higher the temperature of the condensate, the more severe the cavitation.
Small installation space. no need a separate water collection tank	Large installation space – a separate water collection tank is required.
Low energy consumption.	High energy consumption.
Can be used in hazardous and explosion-proof applications without special explosion protection measures.	Special explosion-proof measures are required to be used in hazardous and explosion-proof conditions.
Easy installation	The installation is complicated

MECHANICAL CONDENSATE RECOVERY UNITS

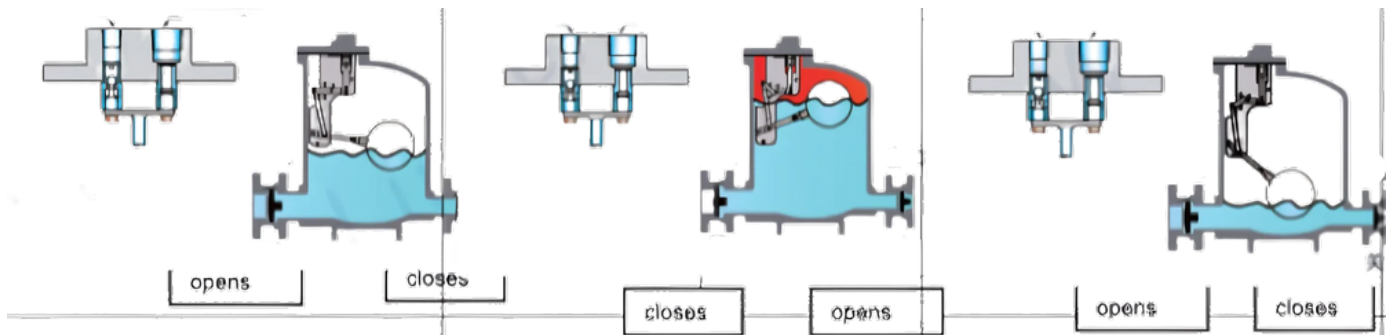


Working Principle

- Close the motive gas inlet
- Open the exhaust outlet

- Open the motive gas inlet
- Close the exhaust outlet

- Close the motive gas inlet
- Open the exhaust outlet



When the equipment starts, the exhaust port is opened, the motive gas inlet is closed, the condensed water enters the pump body through the check valve, and the floating ball rises.

When the equipment starts, the exhaust port is opened, the motive gas inlet is closed, the condensed water enters the pump body through the check valve, and the floating ball rises.

The air in the pump body is discharged from the exhaust port. When the pump body is full of condensed water, the linkage device of the pump opens the power air inlet and closes the exhaust port at the same time. The pump works from the water injection cycle to the drainage cycle, and the condensed water is discharged into the recovery system.

MECHANICAL CONDENSATE RECOVERY UNITS

Typical Applications

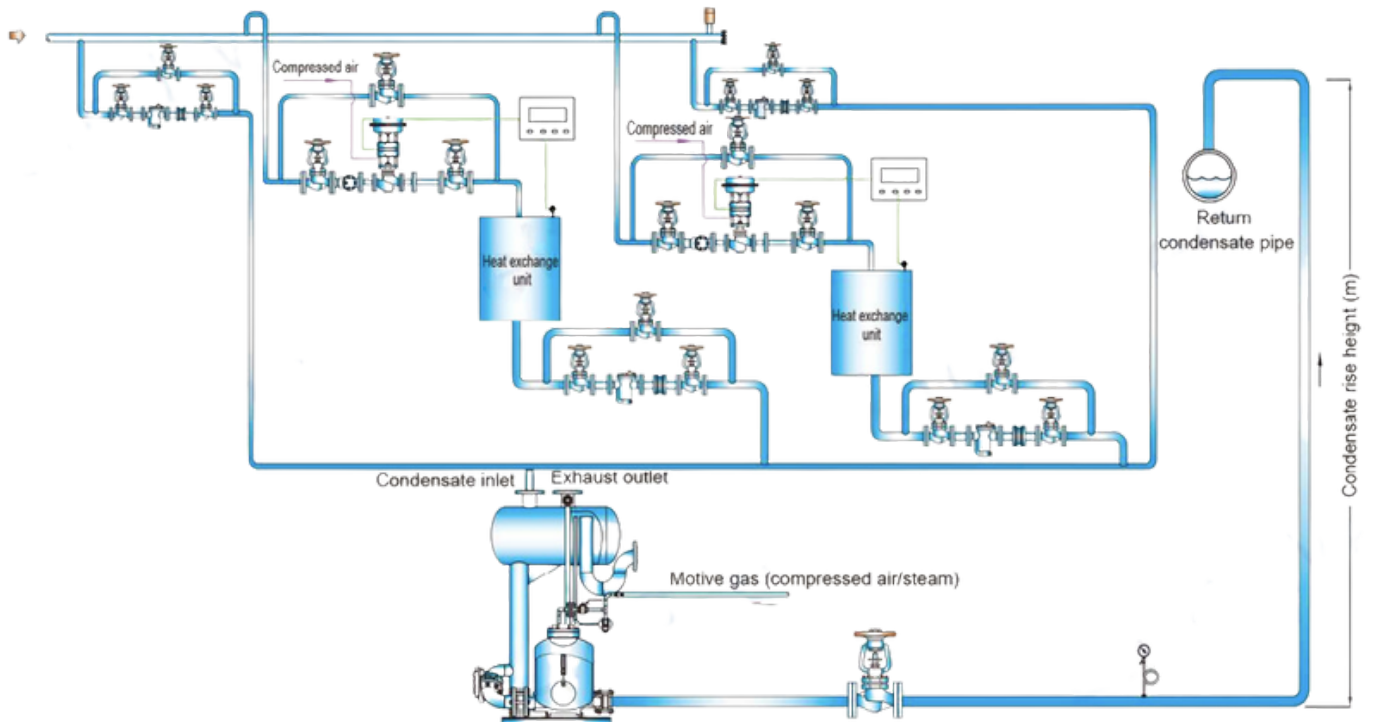
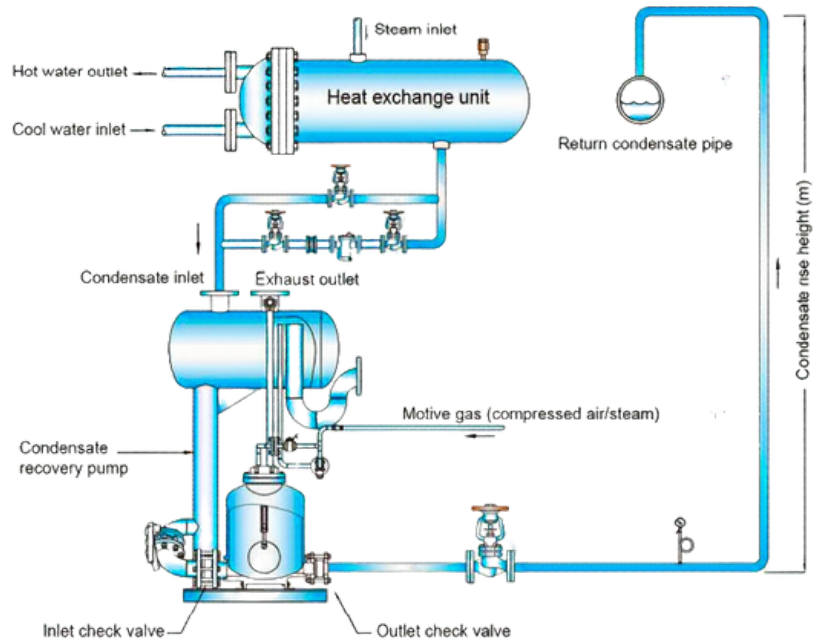
1. Opened condensate recovery system

Advantages

- Condensate recovery for multiple devices.
- Can be driven by air or steam.
- The system is relatively simple.

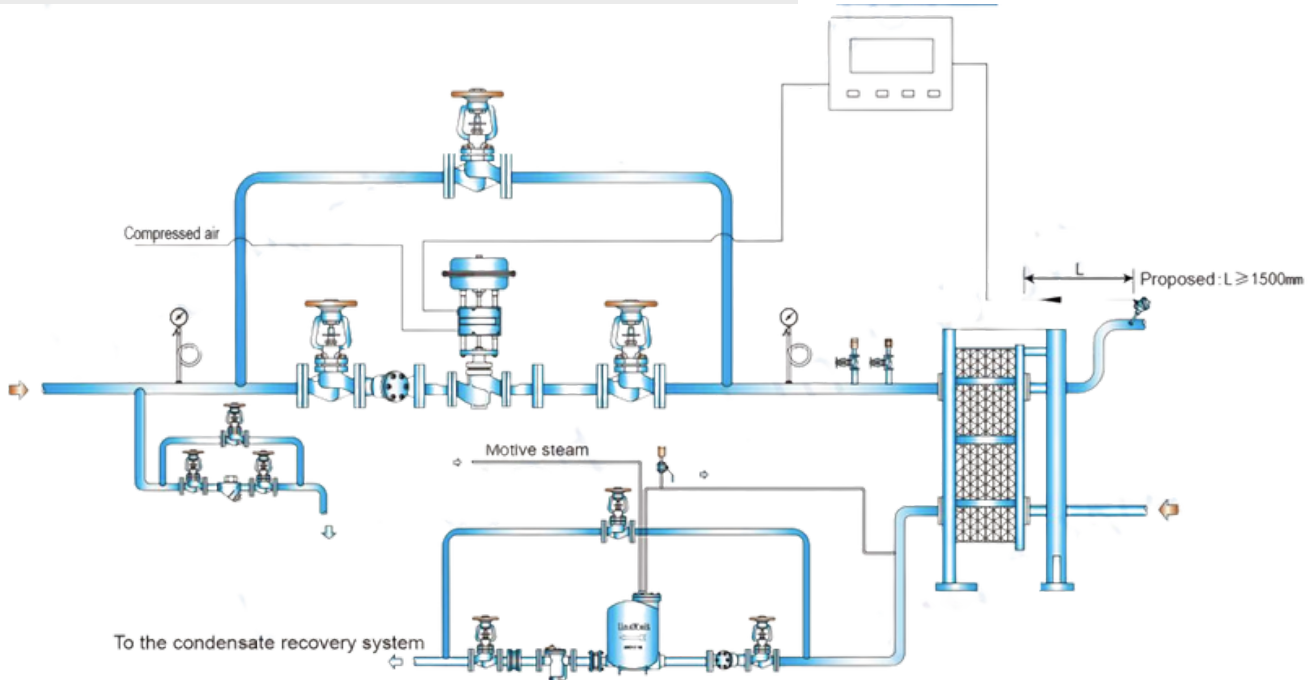
Disadvantages

- Inability to recovery valuable flash steam.
- There must be set a pipeline connected to the atmosphere.



MECHANICAL CONDENSATE RECOVERY UNITS

2. Closed condensate recovery system

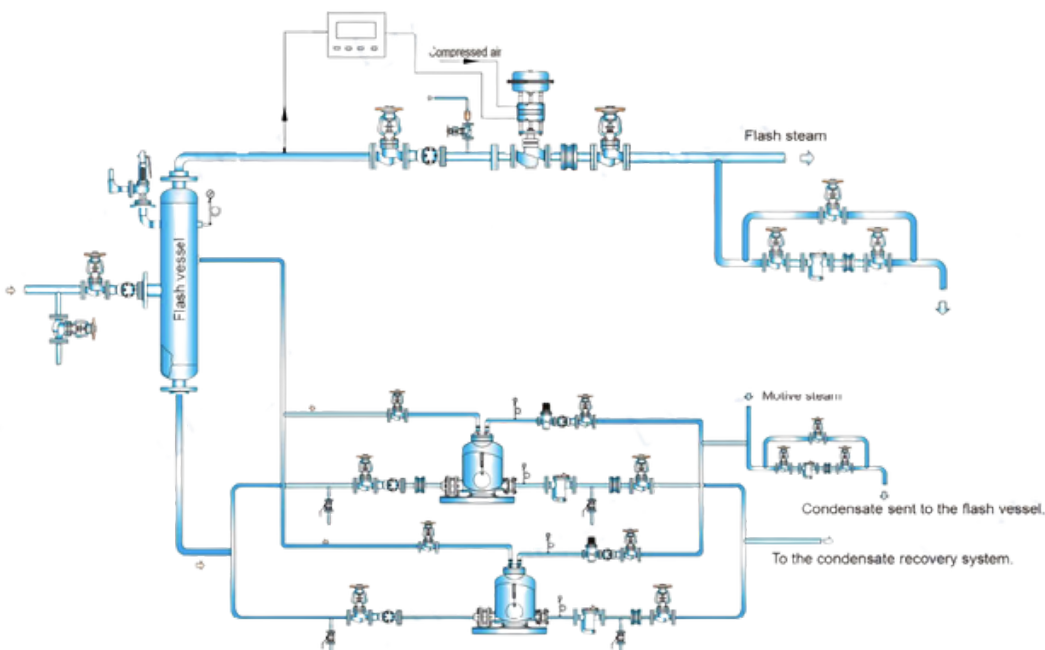


Advantages

- The flash stream and the high temperature condensate ($\leq 198^\circ\text{C}$) can be recovered by the system.
- No need to install expensive piping to atmosphere.

Disadvantages

- The system is relatively complex.
- Unable to use air for motive..



MECHANICAL CONDENSATE RECOVERY UNITS

Operating Range

Model	SKL-CRS
Max. operating pressure (PMO)	13.8 bar
Max. operating temperature (TMO)	198 °C
Size/flange	DN80, DN50, DN25

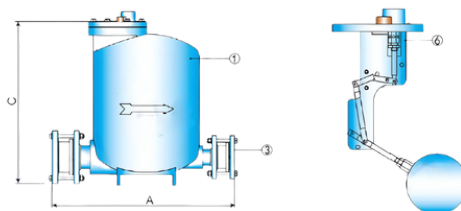
Single Pump Unit



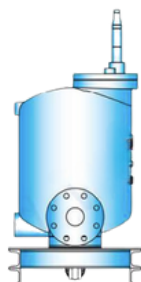
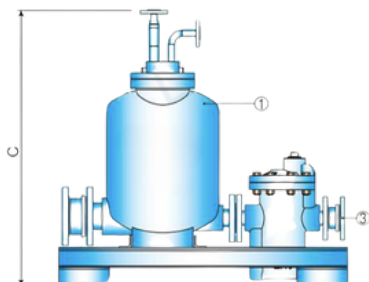
Double Pump Unit



Pump Body



Pump and Steam trap combination



Please provide the following information when ordering:

1. Operating pressure, back pressure
2. Operating temperature
3. Type of connection
4. Flow
5. Size

• Please ask the manufacturer for special sizes and customizations

Contact Us



Ivory Coast

Mr. Rahul

Phone: +225 574654040

EMAIL :- rk@sphenomatic.net

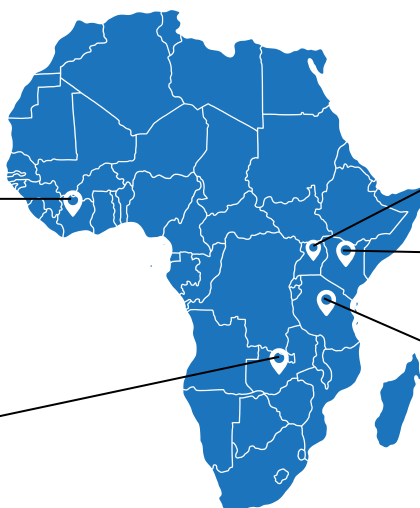


Zambia

Mr. Jaskaran Singh

Phone: +260773579786

Email: jaskaran@sphenomatic.net



Uganda

Mr. Saurabh Patil

Phone: +256706046383

Email :- patil@sphenomatic.net



Head Office, Kenya

Mr. Nawzar Zarir

Satarawala

Phone: +254 726 729812

Email : nawzar@sphenomatic.net



Tanzania

Mr. Mukul Anand

Phone: +255749502808

Email: mukul@sphenomatic.net

Disclaimer: All pictures in this document are a pictorial representation of the product, the actual product may vary. Technical data may vary from the data provided in this document.