

*World of Innovative  
Energy Products*



# Innovative

**ENERPRO PVT. LTD.**

An ISO 9001:2015 Certified Company

## **INNOVATIVE PRESSURE POWERED PUMP PACKAGE UNIT (IPPPPU)**

(CONDENSATE RECOVERY UNIT)



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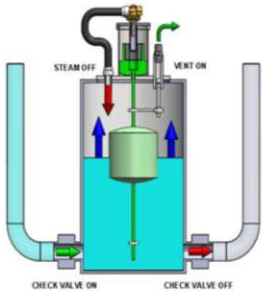
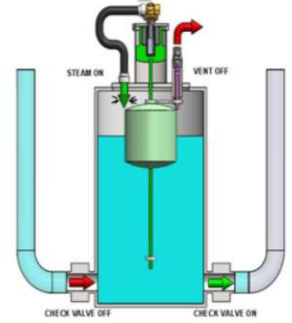
# Why Condensate Recovery?

In process industry there are 80% of steam heat is used and 20% heat comes out in form of condensate. So it is necessary to use this heat again in boiler to **save energy and money**. There is Pressure Powered Pump Package Unit / condensate recovery unit use for transfer steam condensate from plant to boiler feed water tank with help of motive steam or air.

## Working of Principal IPPPU/ Condensate Recovery Unit :

There are two stage of pump unit working

**1) Filling Mode :** Condensate from process will be collected in pump receiver tank due to gravity it will open Check valve and start filling pumping tank. By this time motive inlet is closed and exhaust valve is open so there is no back pressure. This will lead level low to high.



**2) Pumping Mode :** As the level reaches set high level exhaust valve shut off and open the motive steam or air valve. This will allow motive steam or air in tank and push the water level in downward direction. By this time Delivery Check Valve will be open and inlet check valve shut off. When low level reached automatically repeat the cycle. I.e. shut off the motive valve and open the exhaust valve.

## Why Select IPPPU Over Other Pump ?

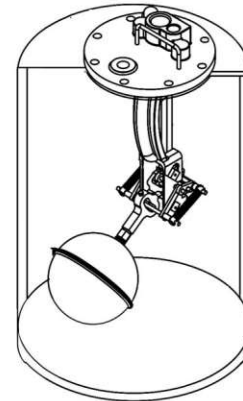
In general pressure powered pump package unit there are mechanical assembly which are very complicated and lot of moving part.

It's replacing or repairing costs are too high. Also SS float puncture with time due to constant expansion and contraction due to temperature variation.

While In our system "APPLIED FOR PATENT" We avoid complication of the operation and make simple with one float moving. We remove SS float which get punchers after some time.

We use special material float which can operate for long time.

So there are no wear and tear will be there so it's almost maintenance free.



More Moving Part



Simple System

## Benefits of Pressure Powered Pump Package Unit Over Other Electric Power Pumping

Innovative Pressure Powered Pump Package Unit	Conventional Electrically operated pump
Less temperature drop	15-20°C more temperature drop.
No Electricity required	More electricity consumption.
Less maintenance require	Frequent maintenance require.
No chance of dry running	Chance of dry running.
No cavitation and Pitting Problem	Cavitation and Pitting problem.

## SS304 PUMP



## MS PUMP



### Features :

- 1) IPPPPU have long life.
- 2) Float material is Special Materials so it will give long life
- 3) No moving part assured zero maintenance.
- 4) Suitable for high temperature application. No cavitations problem.
- 5) Can be operated on compressed air.
- 6) Available in various sizes & available in M.S. & S.S Material

## Specification :

TYPE	MECHANICAL
<b>MOC</b>	
Pump Body, Piping & Flange	SS 304/ MS
NRV-DCV	SS 304
Isolation Valve	SS 304
Strainer	SS 304
<b>Utilities requirement</b>	
Motive Steam OR Air	2-8 kg/cm <sup>2</sup>
Maximum back pressure	3.5 kg/cm <sup>2</sup>
Steam consumption	3 kg /1000 kg of condensate OR
Air consumption	22 SCF / 1000kg of condensate
<b>Design Specification</b>	
Design pressure pump	10 kg/cm <sup>2</sup>
Design Temperature	180°C
Design size	25NB/ 40NB/ 50NB/80NB
Receiver Tank size	15/30/30/45 Liters
Discharge volume per stroke	15/30/40 /50 Liters
L x B X H (mm)	25 NB 655 x 280 x 1160
	40 NB 750 x 325 x 1470
	50 NB 820 x 360 x 1470
	80 NB 920x 410 x 1500

## Application :

### System :

Tracing Line, Radiator, Cylinder, Dryer, Heat Exchanger, Vessels, Jacketing, Oven, Heating Tank

### Industries :

Pharma, Textile, Automobile, Petro Chemicals, Paper Mill, Sugar Mill, Processing Unit, Chemical

**Note :** We aggressively protect our intellectual properties for our innovation. Patent application has been filed for this innovative product and all intellectual property rights belongs to us. Any imitation or copying of this will be liable for litigation in future.

## Advantages :

### Energy Savings :

- Higher condensate recovery temperature lower fuel bill.
- Reduce boiler blow down.

### Environmental Impact :

- Less make up water required.
- No chemical treatment of feed water.
- No electricity required for pumping condensate.
- Lower carbon footprint.
- Reduction of ETP load

### Safety :

- Safe utilization of flash steam in feed water tank.
- No danger of cavitation in equipment.

### Highly Reliable :

- No moving parts assure minimum maintenance.



## Our Valuable Clients



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📍 **AHMEDABAD** : 33, Parmeshwar Estate -II,  
Opp. HDFC Bank, G.I.D.C. Vatva Phase-1,  
Ahmedabad-382445 Gujarat, INDIA.

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