

# Salient feature of the System Offered by "CENTPRO"

- Selection of correct process scheme based on the type of effluent
- Every ZLD system is a unique designed and custom made to suit the effluent type
- Lower capital and operating costs
- Highly energy efficient
- Useable evaporative condensate generation from effluent
- Effective use of combination cooling film & Forced circulation in multiple effect evaporator with Thermovapour recompressor (TVR), Feed preheating and Condensate flashing system to achieve highest steam economy.
- Removal of solvents from high COD stream using stripper column
- Dry powder / baggable solids are produced in uniquely designed dryer / ATFD plant
- Proper implementation of ML cycle system + Centrifuge for salt recovery
- Proper designed thus less cleaning frequency & Plant Stoppages
- Available in both fully automated and manual operation mode In house state of art manufacturing facility and quality control. All equipments are manufactured as per international codes and quality standards to meet specific needs



## Centpro Engineering Private Limited



Company Video QR Code

## ZERO LIQUID DISCHARGE SOLUTION

Save **Water**,  
Save **Environment...**



**Office Address**  
306 , Vishal Ventilla  
Magarpatta Road,  
Hadapsar, Pune,  
Mh, India 411013

**Factory Address**  
Plot No.01, Sector No.10,  
PCNTDA, Bhosari - MIDC  
Pune : MH- India - 411 026



**Phone**  
+91 - 20-2689 0212  
+91 - 838 103 2727  
+91 - 702 866 1818



**Email**  
sales@centpro.com  
info@centpro.com



**Website**  
www.centpro.com



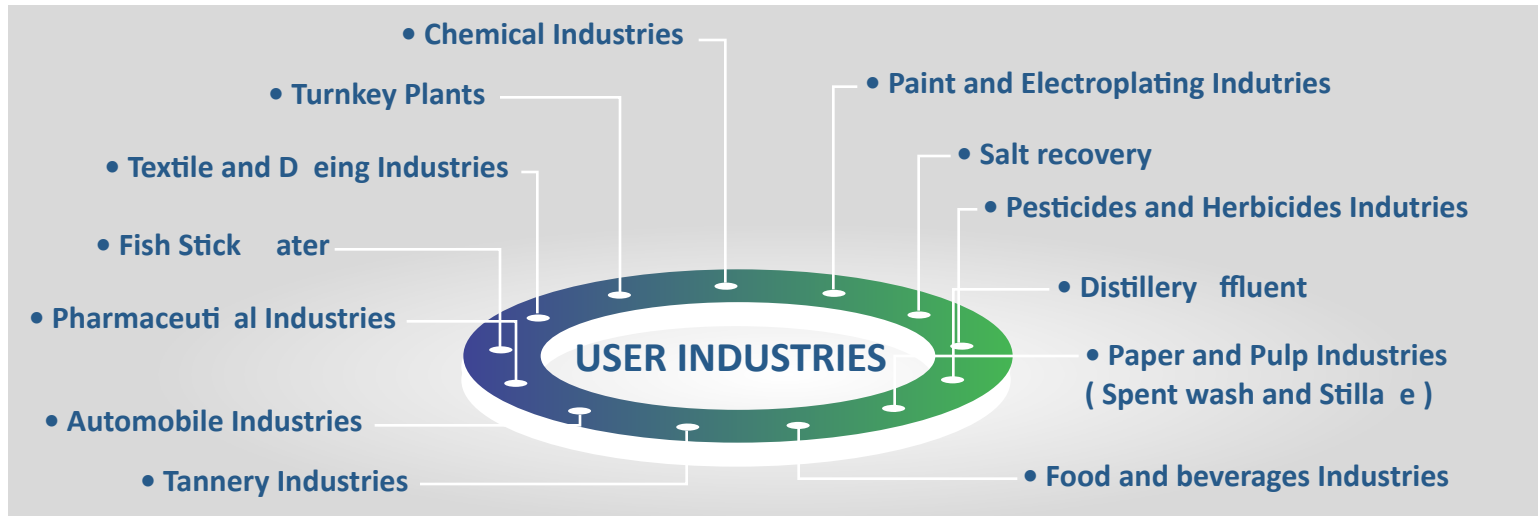
# Zero Liquid Discharge

(ZLD) systems why needed?



## Reduce, Reuse, Recycle

"ZLD" can produce useable stream of water from industrial effluent / waste water suitable for reuse in plant for various applications and discharging concentrate stream to produce baggable solids / powder / salts which is then sent for disposal / incineration.



## General Treatment Scheme For Zero Liquid Discharge Systems

- Zero Liquid Discharge is achieved by initially treating effluent in series of water treatment processes like primary, secondary & tertiary treatment OR as per effluent characteristics it is directly treated in thermal methods.
- In tertiary treatment RO is most commonly used method. After RO the reject stream still contains large amount of water which in thermal treatment method is converted into vapour followed by condenser to recover water and thereby only discharging solid.
- Thus whatever water present in the effluent is recovered as useful water and solids present are discharged in the form of baggable solids / powder / salt which is sent for disposal. This meets the requirement of "ZERO LIQUID DISCHARGE" system.

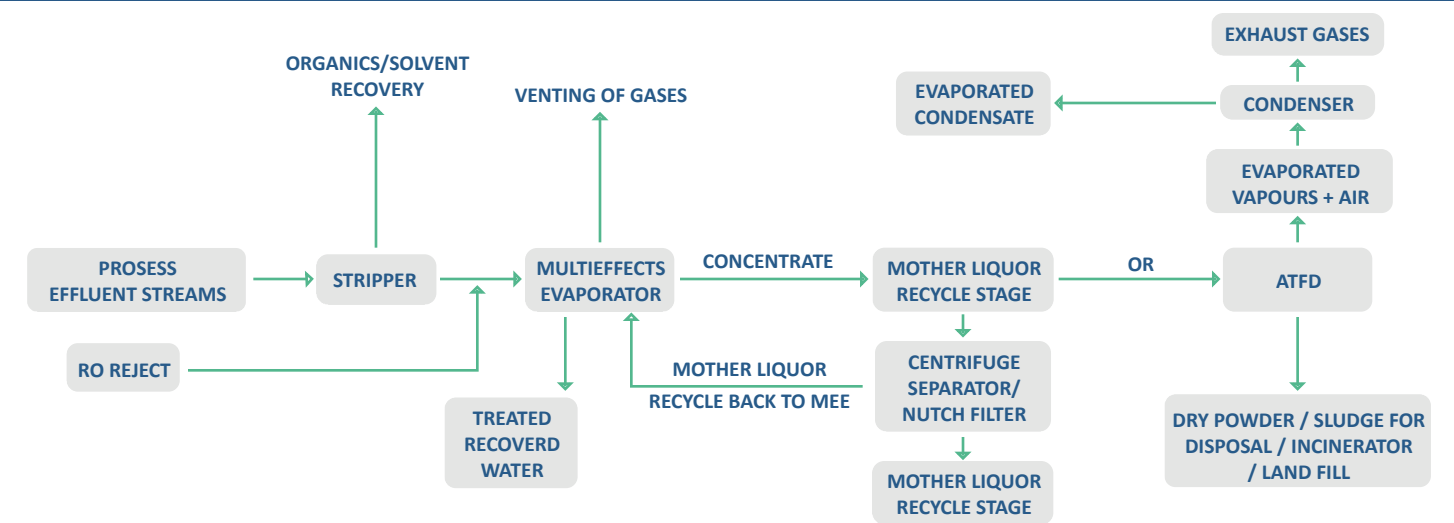


## We Mind Zero Tolerance for Water Pollution

- Everyone needs water and there is always increased demand of water due to increased industrial development and urbanization.
- To comply with statutory laws of the environment, for reduction of increased water demand through proper recycle, reuse of treated effluent / waste water.
- Ultimate aim is to make healthy environment by proper water and environment management.

# Salient feature of the

The Plants Offered By Centpro For "ZLD"



### 1 High Steam Economy

We offer a system comprising of Thermovapour re-compressor (TVR), Feed pre-heaters, Condensate flashing to reduce the steam consumption & thus achieving higher steam economy.

### 2 Turnkey Plant Package

Easy & quick CIP facility for the plant, Fully automated and manual operation mode as per requirement.

#### Complete Turnkey Plant Package

- Comprising of Calendrias
- Pre-heaters
- Vapor-liquid separators
- TVR
- Pumps
- Vacuum system
- Hardware
- Piping
- Cabling
- Instrumentation & Control
- Installation

## MULTIPLE EFFECT EVAPORATORS & CRYSTALLIZER

### 3 Best Performance

Properly selected & designed scheme, adequate heat transfer area at best operating temperatures ensures the plant performance for longer time and reduces CIP frequency & plant stoppages.

### 4 Customised Design

We offer all sizes and all type of evaporators namely Falling film, Forced circulation, Sapped surface, Evaporator Crystallizer in effective combination with Multiple effect evaporator system. The optimum number of effects in combination with falling film and forced circulation offered by us ensures least operating cost at the balance of capital cost.

Commissioning and Good after sales services are salient features of the system offered by us.

### Agitated Thin Film Dryer (ATFD)

Widely used in ZLD application to produce dry powder / baggable solids from the concentrated effluent stream in a single stage.

Complete package with stripper column, Reboiler, Main and Vent condenser, Pumps, Hardware, Instrumentation & Control is offered by us to meet the specific needs.

### Incinerator

This is the last stage operation in which the solids discarded from effluent are burned in all respect.

### Effluent Stripper

Normally utilized aer evaporator where evaporator concentrated is fed to the ATFD where in water is recovered in the form of evaporator condensate and discharging dry powder / bag gable solids.

Especially used for removal of low boiler solvents from high COD effluent stream.