



**TEEMER TRADING**  
DELIVERING EXCELLENCE

# TEEMER TRADING

## EXCELLENCE IN WATER TREATMENT SOLUTION

### PRODUSTS WE OFFER

- Zero Liquid Discharge (ZLD)
  1. Mechanical Vapour Re-compressor Evaporator (MVRE)
  2. Multi Effect Evaporator and Crystallizer (MEE)
- Plate Falling Film Evaporator (PFFE)
- Airo DAF Clarifier
- Plug and Play DAF
- Paddle dryer
- Sludge De-Watering Machine - Multi Disk Screw Press
- Turbo Oxy Jet Aerator/Aspirator (Mixer)
- Cross Flow Separator
- Rotary Drum Screen
- Parabolic Screen
- FAT Removal Unit
- Oil water separator
- Lamina Clarifier
- Polymer Preparation Unit

Our brands....



**“Recycled Crystal Clear Water is our Business”**

## Zero Liquid Discharge (ZLD)

Zero Liquid Discharge (ZLD) is an advanced and sustainable wastewater treatment strategy that ensures the complete elimination of liquid waste from industrial processes by recovering up to 100% of reusable water and converting the remaining effluent into manageable solid waste, thereby enabling industries to achieve stringent environmental compliance, reduce freshwater dependency, minimize ecological impact, and promote resource recovery; increasingly recognized as a critical necessity in sectors such as power generation, textiles, pharmaceuticals, chemicals, oil & gas, and food processing where wastewater discharge must be tightly controlled or eliminated, TEEMER's ZLD solutions are engineered to deliver highly efficient, reliable, and compact systems that are both cost-effective and energy-optimized—centered around two core evaporation technologies:

- **Mechanical Vapour Re-compressor Evaporator (MVRE)**- for minimal steam usage and high energy recovery
- **Multi Effect Evaporator (MEE)**- for staged concentration and maximum thermal efficiency.

## Mechanical Vapour Re-compressor Evaporator (MVRE)



### Mechanical Vapour Re-compressor Evaporator (MVRE)

Mechanical Vapor Recompression Evaporator (MVRE) is an energy-efficient water recovery system that uses minimal steam to extract clean water from wastewater. In this system, the effluent is initially heated to its boiling point using steam or an electric heater. The Mechanical Vapor Re-compressor then compresses the resulting low-temperature vapors into high-temperature vapors, enabling continuous evaporation of the wastewater. These compressed vapors pass through a heat exchanger, where they condense to yield pure water, while also generating low-temperature vapors that are recirculated for further compression and evaporation.

### **Industries Using Mechanical Vapour Re-compressor Evaporator (MVRE)**

- Lowest operating power and steam required
- Online CIP system option available for high fouling effluents
- Ideal where steam is unavailable and captive power is affordable
- Plate Falling Film technology for high-efficiency operation
- Online CIP system for easy maintenance
- Designed for high-fouling effluents

## **Multi Effect Evaporator (MEE)**



### **Multi Effect Evaporator (MEE)**

Teemer MEE is an advanced Multi Effect Evaporator system that combines Plate Type and Shell & Tube Suppressed Boiling Evaporators. Each effect operates at a successively lower pressure and temperature, using the vapors from the previous stage as the heating medium. As vapors condense in each subsequent effect, pure water is collected at each outlet. The partially concentrated effluent is transferred from one effect to the next for further concentration, ultimately leading to crystallization.

Teemer MEE can also be equipped with a Thermo-Vapour Re-compressor (TVR), which utilizes available medium-pressure steam to enhance the system's overall energy efficiency.

### **Industries Using Multi Effect Evaporator (MEE)**

- Concentration of RO Rejects and Brine Waste
- Zero Liquid Discharge (ZLD) in industrial wastewater treatment
- Effluent concentration in chemical and pharmaceutical industries
- Salt crystallization from high TDS streams
- Wastewater reduction in textile and dyeing processes
- Concentration of spent wash and organic effluents
- Pulp & paper industry effluent treatment
- Food and beverage processing wastewater concentration

## Plate Falling Film Evaporator (PFFE)



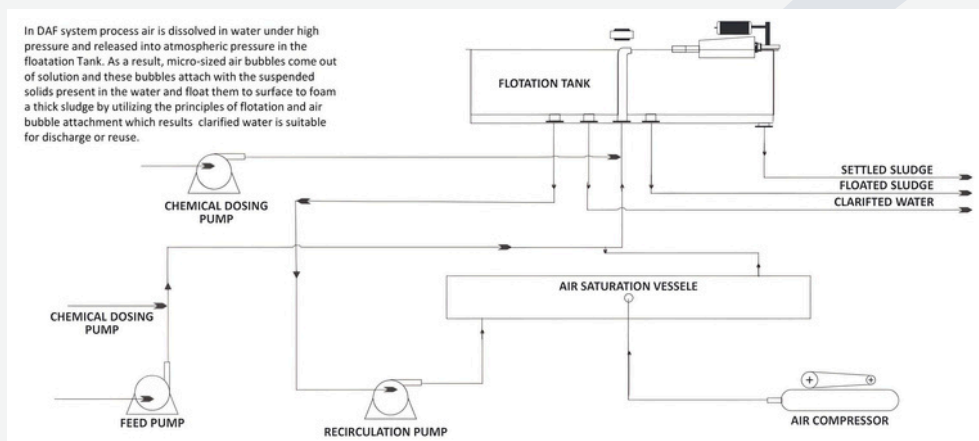
### **Airo DAF ClarifierPlate Falling Film Evaporator (PFFE)**

The Plate Falling Film Evaporator (PFFE) is designed as an efficient alternative to traditional Shell and Tube heat exchangers and vapor-liquid separators. TEEMER PFFE systems offer lower capital and operating costs, along with several performance advantages over conventional Shell and Tube Falling Film Evaporators. They are particularly well-suited for applications involving high evaporation rates, low-viscosity fluids, and substances prone to fouling.

### **Industries Using Plate Falling Film Evaporator (PFFE)**

- Wastewater treatment to achieve zero liquid Discharge
- Low to medium TDS effluent evaporation
- High fouling/scaling effluent handling
- Space-constrained installations
- Effluent pre-crystallization
- Energy-efficient evaporation (textile, pharma, chemical)
- Integration with MVRE or MEE systems
- Continuous operation with online CIP
- Replacement for shell-and-tube evaporators
- Flexible capacity scaling

## Airo DAF Clarifier



### Airo DAF Clarifier

Airo-Dissolved Air Flotation (Airo DAF) is a water treatment system designed to clarify wastewater (or other types of water) by removing suspended materials such as oils and solids. The process works by dissolving air into the water or wastewater under pressure, then releasing it at atmospheric pressure in a flotation tank or basin. As the air is released, it forms tiny bubbles that attach to the suspended particles, causing them to rise to the surface, where they are removed by a skimming device. Dissolved Air Flotation is widely used for treating industrial wastewater from oil refineries, petrochemical and chemical plants, natural gas processing facilities, the dairy and food industries, automobile manufacturing, paper mills, general water treatment plants, and other similar industrial operations. A similar process, known as Induced Gas Flotation (IGF), is also commonly used for wastewater treatment.

### Main Component

- Flotation Tank
- Skimming Device
- Air Saturation Vessel
- Recirculation Pump
- Feed Pump
- Chemical Dosing System

**(Material of construction as per customer requirement)**





## **Process Description**

The feed water entering the AiroDAF float tank is typically (though not always) dosed with a coagulant to bind fine colloidal particles together, and/or with a flocculant to combine these particles into larger clusters. A portion of the clarified effluent from the AiroDAF tank is then pumped into a small pressure vessel known as the Air Saturation Vessel, where compressed air is injected. This saturates the pressurized effluent water with air.

The air-saturated water is recycled back to the inlet of the float tank, passing through a pressure reduction valve as it enters. This sudden drop in pressure causes the dissolved air to form tiny bubbles. These bubbles attach to the suspended particles, particularly at nucleation points on their surfaces. As more bubbles attach, their buoyancy overcomes the force of gravity, lifting the suspended matter to the surface of the tank.

At the surface, the accumulated material forms a froth layer, which is removed by a skimmer. The clean, froth-free water exits the float tank as the clarified effluent from the DAF unit.

## **Salient Features of Airo – Dissolved Air Flotation (DAF) System**

- Very low retention time (approximately 5–20 minutes)
- Compact footprint (space-saving design)
- Easy to install
- Ready to use
- Low chemical consumption
- Produces sludge with higher consistency
- Very low startup time
- High efficiency (95–98%)
- Pre-fabricated unit
- Easy to relocate
- Minimal civil work cost

## **Industries Using Airo DAF System**

- Automobile Industry
- Dairy Industry
- Meat Processing Industry
- Paper and Pulp Industry
- Tannery Industry
- Textile Industry
- Pharmaceutical Industry
- Fish Processing Industry
- Cosmetic Industry
- Paint Shops
- Municipal Sewage Treatment Plants (STP), etc.



## **Available Models**

Model	Maximum Flow	Flotation Tank Dimension	
	(m <sup>3</sup> /hr)	Diameter (mm)	Height (mm)
SNP-α1	6	1200	1000
SNP-α2	12	1800	1200
SNP-α3	34	2400	1250
SNP-α4	60	3200	1250
SNP-α5	90	3900	1250
SNP-α6	120	4500	1250

## Plug and Play DAF



### **Plug and Play DAF**

Our Plug and Play DAF (Dissolved Air Flotation) Unit is a fully integrated, pre-assembled water treatment solution designed for quick deployment and effortless installation. All essential components—flotation tank, air saturation system, control panel, pumps, piping, valves, and instrumentation—are housed within a single compact skid or frame.

### **Features**

- Fully Integrated Unit: Delivered as a complete package—no need for onsite assembly.
- Quick Installation: Just connect the inlet and outlet pipelines—no complex civil work or auxiliary equipment setup required.
- Compact Footprint: Ideal for space-constrained sites or temporary installations.
- User-Friendly Controls: Pre-wired and tested automation system for easy operation and monitoring.
- Low Commissioning Time: Minimal setup time ensures faster startup and operational readiness.

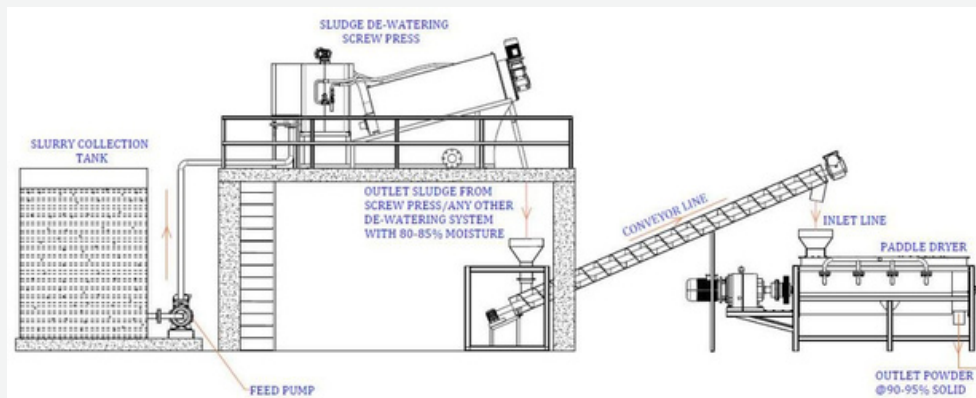


### **Industries Using Plug and Play DAF System**

- Food & Beverage Processing
- Dairy and Milk Processing Plants
- Meat and Poultry Processing
- Pharmaceutical and Chemical Industries
- Oil & Gas / Petrochemical Plants
- Textile and Dyeing Units
- Paper and Pulp Industries
- Municipal and Industrial Wastewater Treatment Plants
- Tanneries and Leather Processing
- Automotive and Metal Finishing Units



## Paddle dryer



### Paddle dryer

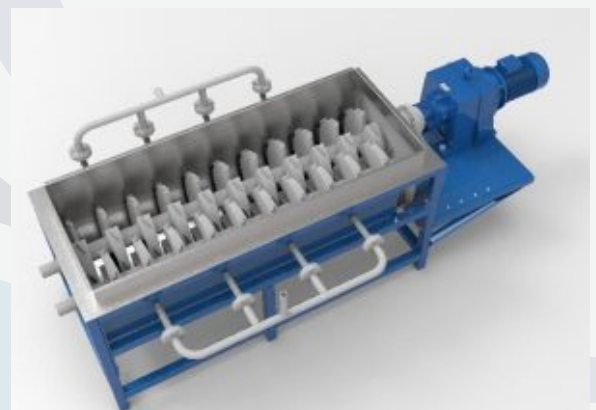
Paddle dryers are used to dry wet cakes, pastes, and thick slurries like sludge. Heating media such as steam, hot oil, or thermic fluid flow through the hollow paddle shaft and jacket, ensuring efficient heat transfer to the material throughout the drying process. The self-cleaning paddle design prevents sticking, while the rotation of the shaft moves the wet feed from one end to the other, allowing moisture to vaporize and achieve the desired final product dryness.

### Features:

- Low operating and maintenance costs.
- Space-saving, compact design.
- Ensures complete discharge of the product.
- High thermal efficiency with a fully enclosed system.
- Efficient drying of sludge and pastes through direct heat transfer.
- Minimal exhaust emissions—no need for complex air purification systems.
- Special paddle design enables effective ploughing and self-cleaning action.

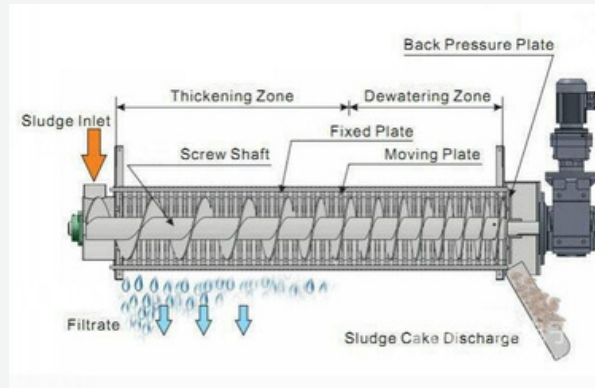
### Industries Using Paddle Dryer

- Chemical Industry
- Pharmaceutical Industry
- Food Industry
- Dairy Industry
- Waste Management (Sludge Drying)
- Agrochemical Industry
- Petrochemical Industry
- Textiles
- Bio Science





## Sludge De-Watering Machine -Multi Disk Screw Press



### Sludge De-Watering Machine -Multi Disk Screw Press

The Sludge Dewatering Screw Press is designed to perform three functions in a single unit: conditioning, thickening, and dewatering. It efficiently handles sludge with inlet concentrations ranging from as low as 0.7% up to 8%. The machine produces an outlet consistency of 18% to 25%, depending on the type of sludge.

#### Features:

- Extremely low energy consumption
- No need for separate thickeners or drying beds
- Clog-free operation with compact footprint
- Fully automatic control system
- Excellent resistance to oily sludge
- Requires minimal manpower
- Very low water consumption for cleaning
- Quiet operation with minimal vibration

### Industries Using Sludge De-Watering Machine

- Municipal Wastewater Treatment Plants
- Food and Beverage Industry
- Pharmaceutical Industry
- Chemical Industry
- Paper and Pulp Industry
- Textile Industry
- Slaughterhouses & Meat Processing Plants
- Dairy Industry
- Oil Refineries & Petrochemical Industry
- Brewery & Distillery Industry
- Automobile industry
- Fish processing unit
- FSTP
- Edible oil
- Gelatin and starch industry
- Agro industry
- Electronics industry
- Electroplating industry

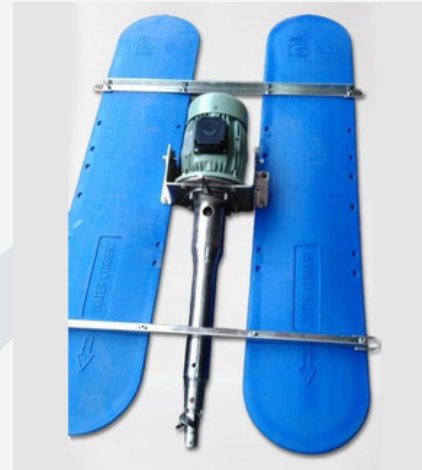
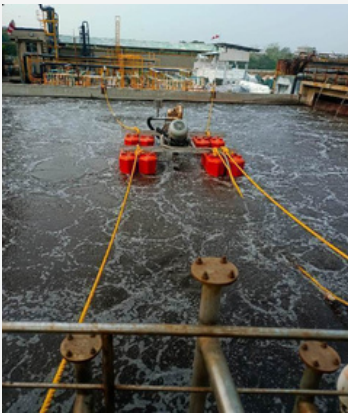


## Available Models

Model	Inlet Flow @1% Conc. (m <sup>3</sup> /hr)	Dry Sludge (Kg/hr)	Electrical Load (KW)	Dimension (L×W×H) (m)	Rinsing Water (L/hr)
SNP 0.3	0.3				
SNP 0.5	0.5	2–5	0.36	1.4 × 0.75 × 0.9	30
SNP 1.0	1.0	5–10	0.36	1.8 × 0.8 × 1.0	40
SNP 1.5	1.5	10–15	0.36	2.1 × 0.8 × 1.1	50
SNP 2.0	2.0	15–20	0.36	2.1 × 0.8 × 1.1	60
SNP 3.0	3.0	20–30	0.55	2.1 × 0.8 × 1.1	80
SNP 4.0	4.0	25–35	0.55	2.9 × 1.0 × 1.5	80
SNP 6.0	6.0	30–40	0.75	3.0 × 1.0 × 1.5	100
SNP 8.0	8.0	35–50	0.75	3.0 × 1.0 × 1.5	150
SNP 10	10.0	40–60	1.30	3.0 × 1.2 × 2.1	200
SNP 15	15.0	50–100	1.80	3.3 × 1.3 × 2.1	250
SNP 20	20.0	120–150	1.80	3.3 × 1.3 × 2.1	300
SNP 25	25.0	200–250	2.20	4.2 × 1.4 × 2.1	350
SNP 30	30.0	250–300	2.20	4.2 × 1.4 × 2.1	400
SNP 35	35.0	300–350	2.50	4.2 × 1.4 × 2.1	450
SNP 40	40.0	350–400	3.00	5.6 × 1.6 × 2.3	500
SNP 50	50.0	400–500	3.50	5.6 × 1.6 × 2.3	600
SNP 60	60.0	550–600	4.80	6.6 × 1.7 × 2.3	900
SNP 75	75.0	700–750	5.50	4.9 × 1.8 × 2.4	1000



## Turbo Oxy Jet Aerator/Aspirator (Mixer)



### Turbo Oxy Jet Aerator/Aspirator (Mixer)

Turbo Jet Aerator and Turbo Oxy Jet Aerators are the latest advancements in aeration technology, specially designed for efficient surface-mounted applications in wastewater treatment. Utilizing a regenerative blower, these systems inject air and water horizontally below the water surface, achieving superior mixing and oxygenation compared to traditional aerators. The result is enhanced treatment performance, energy efficiency, and adaptability to various operating conditions.

### Features

- High-efficiency horizontal water jet mixing
- Superior oxygen transfer and higher D.O. levels
- Energy savings up to 35% over conventional aerators
- Low noise operation
- Minimal odour generation
- Easy integration with oxygen sensors and VFD control
- Suitable for nitrification/denitrification operations
- Simple maintenance; can be done by semi-skilled personnel
- Compact and easy installation
- Compatible with multiple floatation systems
- Made in India with global support and exports
- Simple maintainance
- Eco friendly and user friendly
- Can be used for combined aeration system
- Easy of operation/maintainance

### Industries Using Turbo Oxy Jet Aerator/Aspirator (Mixer)

- Municipal Wastewater Treatment Plants
- Industrial Effluent Treatment Plants
- Agricultural Wastewater Installations
- Intermittently Operated Biological Systems
- Aquaculture pond/lake/lagoon/pool water bodies



## Available Models

Model No.	Power (kW/HP)	Noise dB(A)	Blower	Aerator Weight (kg)	Float Assembly (kg)	Combined Weight (kg)	Flotation Type
AMTO - 5	3.7 / 5	60	-	110	140	250	3-FLOAT
AMTO - 7.5	5.5 / 7.5	60	-	110	140	250	3-FLOAT
AMTO - 10	7.5 / 10	60	Proprietary	100	140	240	3-FLOAT
AMTO- 15	11.0 / 15	70	Blower Data	150	140	290	3-FLOAT
AMTO- 20	15.0 / 20	70	Available on	150	160	310	3-FLOAT
AMTO- 25	18.5 / 25	70	Available on	170	140	310	3-FLOAT
AMTO - 30	22.0 / 30	75	To EURODETOX	300	200	500	3/4-FLOAT
AMTO - 40	30.0 / 40	75	-	420	200	620	3/4-FLOAT
AMTO - 50	37.0 / 50	80	-	500	200	700	4-FLOAT
AMTO- 60	45.0 / 60	80	-	575	250	825	4/5-FLOAT
AMTO- 75	55.0 / 75	80	-	625	250	875	4/5-FLOAT

## Cross Flow Separator (For Anaerobic Reactor Outlet-Dairy Industry)



### Cross Flow Separator

CROSS flow Separator water treatment equipment that clarifies wastewaters (or other waters) by the removal of suspended as well as settleable matter such as oil or solids. When effluent passes in horizontal direction between the plate pack which are closely placed. Due to this the laminar flow condition established while the water flows across the plate pack from the inlet to the outside.

### Working of Counter Flow Separator with Plate Pack

The Cross Flow Separator is a high-efficiency solid-liquid separator designed for anaerobic effluent from dairy processing. It is capable of removing both floating oils/fats and settleable solids, ensuring a clarified water stream for downstream treatment.

### Industries Using Cross Flow Separator

- Dairy industry (anaerobic effluent treatment)
- Food and beverage processing
- Oil-water separation in refineries and machine shops
- Municipal and industrial wastewater treatment
- Chemical and pharmaceutical plants
- Meat and poultry processing





## Rotary Drum Screen

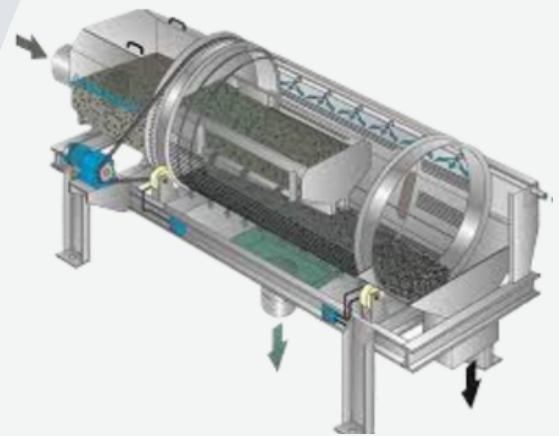


### Rotary Drum Screen

The internally fed rotary drum screen uses a rotating drum for effective fine screening of a wide range of materials in a simple and reliable design. The unit uses a cylindrical screen consisting of perforated metal, wedge-shaped wire or filter cloth and a weir system. As the material is fed into the inlet of the unit, it is distributed along the surface of the internal screen.

### Industries Using Rotary Drum Screen

- Municipal Wastewater Treatment Plants
- Food and Beverage Processing (e.g., vegetables, meat, poultry, seafood)
- Dairy Industry (whey and process water screening)
- Pulp and Paper Industry (fiber recovery and process water screening)
- Pharmaceutical and Chemical Manufacturing
- Brewery and Distillery Effluent Treatment
- Textile Industry (fiber and lint removal)
- Oil and Gas Industry (pre-treatment of oily wastewater)
- Tanneries and Leather Processing Units
- Power Plants (cooling water intake screening)



## Parabolic Screen



### Parabolic Screen

Parabolic screen units, sometimes referred to as "sidehill", are used for the removal of large insoluble material from water and waste water. Screens are used on process streams for large particle separation to protect down stream systems. The screen can also be used for product recovery as well as solids separation and mixed settleable solids for both municipal and industrial applications.

### Industries Using Parabolic Screen

- Municipal Wastewater Treatment (headworks screening, grit removal)
- Food and Beverage Industry (fruit & vegetable washing, meat & poultry processing)
- Dairy Industry (cheese curd recovery, whey separation)
- Pulp and Paper Industry (fiber recovery)
- Breweries and Distilleries (grain solids separation)
- Textile Industry (lint and fiber screening)
- Tanneries and Leather Processing
- Pharmaceutical Manufacturing (process water solid separation)
- Mining and Mineral Processing (coarse solid recovery)
- Agriculture (manure and biomass solid-liquid separation)



## FAT Removal Unit



### FAT Removal Unit

Fat Removal Unit (FRU) Used for the Removal of Floated Fat, Oil & Grease form the Water Fat Removal Unit (FRU).

In the dairy industry's Effluent Treatment Plant (ETP), a fat removal unit plays a critical role in removing fats, oils, and grease (FOG) from wastewater before biological treatment. This is essential because high fat content can: Inhibit microbial activity in biological treatment systems cause clogging and odor issues increase the chemical oxygen demand (COD) and biochemical oxygen demand (BOD) of the effluent.

## **Benefits of Effective Fat Removal**

- **Reduced Load on ETP**

Removing fats and solids before the main ETP stages reduces the overall organic load, improving the efficiency of aerobic and anaerobic digestion, and lowering the need for chemical dosing.

- **Improved ETP Efficiency**

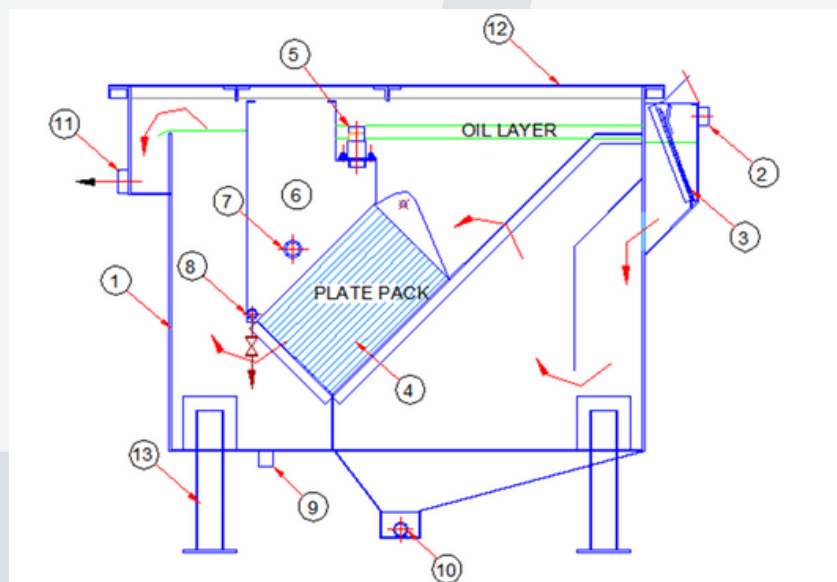
With less organic matter and solids, aeration and biological treatment processes are more efficient.



## **Industries Using FAT Removal Unit**

- Dairy Industry (milk, cheese, butter production effluents)
- Meat and Poultry Processing Plants
- Seafood Processing Units
- Edible Oil Refineries
- Food and Snack Manufacturing
- Restaurants and Central Kitchens (Commercial Kitchens)
- Bakeries and Confectionery Production
- Catering and Institutional Food Services
- Cosmetic and Personal Care Product Manufacturing (oil-based waste)
- Pet Food Manufacturing Units

## **Oil water separator**



## **Corrugated Plate Interceptors (CPI)/ Tilted Plate Interceptors (TPI)**

Corrugated Plate Interceptors (CPI) works on the principle of Stoke's law and has capacity of removal of free oil upto 90%. CPI allows the effluent to pass through a plate pack which decreases the turbulence in flow and helps the oil to rise above surface. From the surface it spills in the oil tank which is integrated in the CPI tank. The oil free water eventually comes out from the outlet. System is designed to remove Oil droplet size of upto 50 micron

## **Industries Using Corrugated Plate Interceptors (CPI)/ Tilted Plate Interceptors (TPI)**

- Oil & Gas Industry
- Power Plants
- Chemical & Petrochemical Industry
- Steel & Metal Processing Units
- Automobile & Engineering Industries
- Food & Beverage Industry
- Marine & Shipyards
- Textile Industry
- Paper & Pulp Industry
- Municipal & Industrial Effluent Treatment Plants

## **Lamina Clarifier**

### **Lamina Clarifier**



A Lamella Clarifier is a compact, inclined plate settler designed for effective removal of suspended solids from water and wastewater. It operates on the principle of gravity settling, where the inclined plates increase the effective settling area, allowing faster and more efficient clarification in a smaller footprint compared to traditional settlers. It is widely used in primary and tertiary treatment stages in various industrial processes.

### **Industries Using Lamella Clarifiers**

- Municipal Water & Wastewater Treatment
- Food & Beverage Industry
- Pulp & Paper Industry
- Textile & Dyeing Units
- Steel & Metal Processing
- Chemical & Pharmaceutical Industry
- Power Plants
- Mining & Mineral Processing
- Dairy & Meat Processing Plants
- Automotive & Engineering Units



## Polymer Preparation Unit



### Polymer Preparation Unit

A Polymer Preparation Unit (PPU) is an automated system used for the accurate preparation, activation, and dosing of polymer solutions (typically flocculants or coagulants). These polymers enhance the aggregation of fine particles, improving the efficiency of sedimentation and filtration in water and wastewater treatment systems. PPUs ensure consistent mixing, aging, and feeding of the polymer solution.

### Industries Using Polymer Preparation Unit

- Municipal Sewage Treatment Plants (STPs)
- Industrial Effluent Treatment Plants (ETPs)
- Pulp & Paper Industry
- Oil & Gas Industry
- Chemical Manufacturing
- Mining & Slurry Dewatering
- Food & Beverage Processing
- Textile & Dyeing Industry
- Dairy Processing Plants
- Power Generation Plants

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