Clarifiers & Thickeners
# Wide Range of Clarifiers & Thickeners

## Clarifier - Circular / Square Tank
- Full Bridge - Central Drive
- Half Bridge - Central Drive
- Lamella / Tube Settler
- Rotating Bridge - Peripheral Drive

## Clarifier - Rectangular Tank
- Travelling Bridge Sludge Scraper
- Chain & Scrapper Sludge Collector

## Clariflocculator - Circular Tank
- Rotating Bridge - Peripheral Drive With 2 / 4 Flocculators
- Central Driven With Independent Flocculator Drives / Dual Stack Concentric Flocculator Drive

## Reactor Clarifier - High Rate Solid Contact type
- Full Bridge With Side Feed
- Half Bridge With Bottom Feed

## Clarifier - Suction type and Peripheral Feed Suction type
- Full Bridge - Central Drive
- Half Bridge - Central Drive

## Gravity Thickener
- Central Drive - Full / Half Bridge Type
  - Without Rake Lifting Device
  - With Manual / Semi-automatic / Automatic Rake Lifting Device
- Peripheral Drive - Rotating Bridge

- Dissolved Air Flotation Thickener

- Gravity Belt Thickener
Clarifier / Thickener / Clariflocculator

Central Drive Unit
- Bridge spanning full tank diameter (with Center Shaft) / half the tank diameter (with Center Cage)
- Rake arms spanning full tank diameter
- Range of rugged Central Drive heads with torque overload sensing
- Surface skimmer (Optional)

- Manual / semi-automatic / automatic rake lifting (Optional)
- Designs upto 30M diameter (Full Bridge) and upto 70M diameter (Half Bridge)
- Lamella / Tube Settler options available for high rate clarification

Peripheral Drive Unit
- Rotating Bridge spanning half the tank diameter or more
- Clariflocculator design with 2 / 4 Flocculation paddles
- Rake arms suspended from the bridge

- Peripheral drive designs with Rubber / PU tyred wheels running on concrete wall / Steel wheels running on rails
- Surface skimmer (Optional)
- Designs upto 60M diameter and above

Central Drive Clariflocculator
- Fixed Bridge spanning full/half tank diameter. Rake arms spanning the full tank diameter
- Centrally driven rake arms through rugged drive head

- Designs with 2/4 Floc Paddles with independent drives
- Alternate Single flocculator drive with concentric dual stack drive design upto 40M diameter and above
High Rate Solid Contact Clarifier - Reactor Type

Features
- Mixing, Flocculation and Clarification in a SINGLE unit
- High overflow rates and shorter detention time vs conventional clarifiers resulting in smaller footprint
- Utilises the solids contact principle plus unique “controlled recirculation” bringing previously formed flocs “in contact” with the raw water.

- Varied Applications in Surface Water Treatment for Removal of Turbidity, Suspended Solids, Softening, Colour, Taste and Odour; Primary and Tertiary Treatment of Municipal wastewater, Pulp & Paper, Metal Hydroxide Removal, Steel Waste etc.

Half Bridge with Bottom Feed
- Bridge spanning half the tank diameter & Rake Arms spanning full tank diameter
- Rugged Drive Head with torque overload with independent mixer drive.
- Feed from bottom of tank connecting to central draft tube
- Available for sizes upto 50M and above

Full Bridge with Side Feed
- Bridge & Rake Arms spanning the tank diameter
- Dual Stack drive arrangement with torque overload
- Feed from side connecting to central draft tube
- Available for sizes upto 18M and above
Suction Clarifier

What is it?
- A clarifier mechanism employing a unitube header (a specially designed rectangular shaped arm provided with orifices) in place of conventional rake arms, which sucks the settled sludge hydraulically for further withdrawal.

Advantages
- Positive, Rapid Sludge Removal - Resulting in fresher sludge, less chance of septicity, reduced aeration requirements, prevention of phosphate release
- Maximum Solids Concentration - Resulting in reduced sludge volumes, lesser pumping & disposal costs
- Minimum Sludge Turbulence - Suction removal of sludge minimizes underwater disturbance and re-suspension of sludge assisting in consistent clear overflow
- Economy - Requires virtually flat floors resulting in reduced civil costs, reduced torque and power requirements, superior sludge quality resulting in lower aeration requirements

Peripheral Feed Suction Clarifier

What is it?
- Clarifier with Peripheral Feed & Peripheral Take off

Applications
- Secondary / Final Clarifier typically in Municipal Wastewater Treatment

Advantages
- Hydraulic Efficiency - 50 to 80% more than the conventional center feed clarifier
- Higher Overflow Rates - resulting in reduced foot print / less number of units
- Eliminates Short circuiting, permitting full utilization of tank volume and reduction in surface area by as much as 50% as compared to conventional center feed unit
Clarifier - Rectangular Tank

Travelling Bridge Sludge Scraper

**Advantages**
- Effective Removal of Sludge towards influent end of the tank
- Effective Removal of Scum / Floating material towards effluent end of the tank
- Entire tank area coverage

**Features**
- Bridge spanning the entire tank width traveling on Steel rails as both sides of the tank
- Suspended scraper and skimmer arms from bridge
- Festoon Electrification for bridge mounted drives
- Bridge mounted Controls for auto manual operation
- Optional Rack & Pinion arrangement for non-slip traction for extra-wide tanks / heavy sludge loads

![Travelling Bridge Sludge Scraper](image)

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Chain & Scraper Sludge Collector

**Advantages**
- Endless Chains along each side of the tank carried on sprockets with Flights attached at regular spacing spanning the entire tank width
- Available also in non-metallic Chains, Sprockets, Flights etc. for corrosive / hazardous applications

**Features**
- Effective Sludge Removal to one end of the tank
- Effective Removal of Scum / Floating material to other end of the tank
- Entire tank area coverage

![Chain & Scraper Sludge Collector](image)
Dissolved Air Flotation Thickener

Features & Benefits

- Exceptionally effective in concentrating chemically treated sludges as well as sludges floated without the use of chemicals
- With chemicals, loadings can be increased up to 3 times
- Choice to operate with or without chemicals depending on best economies for each situation
- Achieving 5% total solids and more on biological sludges alone, far surpassing the performance of conventional gravity systems
- Employs principle of Floating the solids to the tank surface by millions of tiny air bubbles, forming a highly concentrated sludge blanket
- Introduces air into an external liquid source such as recirculated effluent at elevated pressure in a saturation tank and then blending this air saturated stream flow with the sludge to be thickened
- Floated thickened sludge is continuously skimmed from tank surface by chain & flight skimmer assuring scum removal at highest possible solids concentration

Gravity Belt Thickener

Features & Benefits

- Efficiently reduces the volume of wastewater sludge both - industrial and municipal process slurries
- Uses principle of liquid separation by gravity drainage enhancing separation by sludge rolling action
- Small Foot print
- Low capital cost, easy installation
For more details, please contact

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