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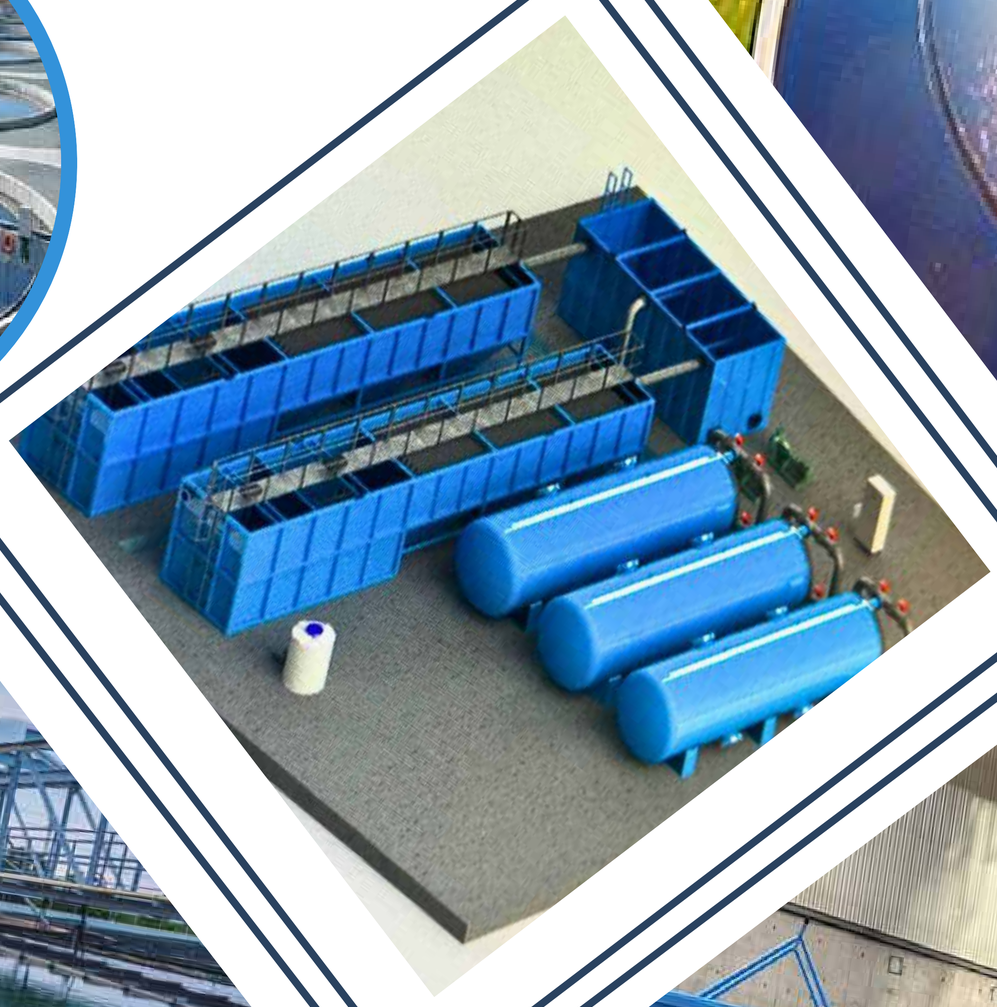

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NUR GROUP
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Our Mission:

About Us:

NUR GROUP was established in 2010 and has since developed extensive expertise and a high level of professionalism in the field of water treatment.
The company specializes in providing comprehensive environmental solutions, with a particular focus on wastewater treatment, drinking water purification, and the removal of gases and odors.
NUR GROUP is committed to promoting environmental sustainability by utilizing the latest technologies and delivering innovative and effective solutions aimed at improving water quality and preserving natural resources.
In addition, the company exports its equipment and systems to more than 40 countries worldwide.

Our Vision:

NUR GROUP is committed to delivering innovative and sustainable solutions that contribute to improving quality of life and reducing environmental impact. The company strives to build long-term partnerships with its clients by providing high-quality services and continuous technical support.

Our Mission:

For a more sustainable future through the delivery of comprehensive and integrated environmental solutions.

Our Motto:

**“Healthy Water,
Healthy Environment”**

Our Services:

- Preparation of engineering drawings for projects
- Installation and commissioning of all treatment units manufactured in-house
- Project supervision
- Environmental consulting
- Technical services
- Supply support for consumables and equipment related to water treatment and wastewater treatment systems

Our Products:

- MBBR (Moving Bed Biofilm Reactor) Treatment System
- MBR (Membrane Bioreactor) Treatment System
- SBR (Sequencing Batch Reactor) Treatment System
- Mechanical Equipment
- RO (Reverse Osmosis) System
- River Water Complexes
- DAF (Dissolved Air Flotation)
- Odor Removal System
- Industrial Wastewater Treatment System

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Fixed Bridge Circular Clarifiers:

Fixed Bridge Circular Clarifiers - NUR GROUP CEVRE:
Thickening is a critical process in sludge treatment, aimed at increasing the concentration of solid matter by removing excess water. Even a modest increase in solid content (typically between 3% and 6%) can result in a substantial reduction—up to 50%—in the total volume of sludge. This significantly decreases the required size of treatment facilities, making thickening a cost-effective solution, especially for water and wastewater treatment plants. Thickening units are widely utilized to improve sludge density prior to dewatering processes. By increasing the solids concentration, the volume of sludge flow is reduced, thereby enhancing the efficiency of subsequent steps such as drying or final disposal.

NUR GROUP CEVRE designs and manufactures two types of circular thickeners, tailored to various operational requirements:
Central Drive Circular Thickeners with Fixed Bridge
These units are typically employed in small- to medium-scale basins. They are equipped with two scraper arms operated by a centrally mounted drive unit fixed to the bridge. The thickening and scraping mechanism is directly connected to the drive assembly through a central shaft or a truss-type structure. To accelerate the settling of solids, internal components known as picket fences are installed within the tank.
Peripheral Drive Circular Thickeners with Rotating Bridge
Designed for applications requiring alternative drive configurations, these thickeners offer reliable performance in handling larger sludge volumes or site-specific operational needs.
Thanks to their advanced engineering and high efficiency, these systems contribute significantly to sludge volume reduction and overall process optimization, making them an ideal choice for modern treatment plants seeking sustainable and cost-efficient solutions.

Operating Principle:

NUR GROUP CEVRE fixed-bridge circular sludge thickeners operate via a central column where sludge is introduced. Scraper blades and picket fences, driven by a mechanism on the bridge, rotate to thicken the sludge and settle solids at the bottom. These are collected into a hopper for removal, while the clarified supernatant is returned to the treatment process.

Features and Benefits:

- Robust and durable design
- Trouble-free operation
- Easy installation
- Highly efficient mechanism
- High sludge concentration
- Suitable for small and medium-sized tanks
- Adjustable blades and picket fences
- Low energy consumption

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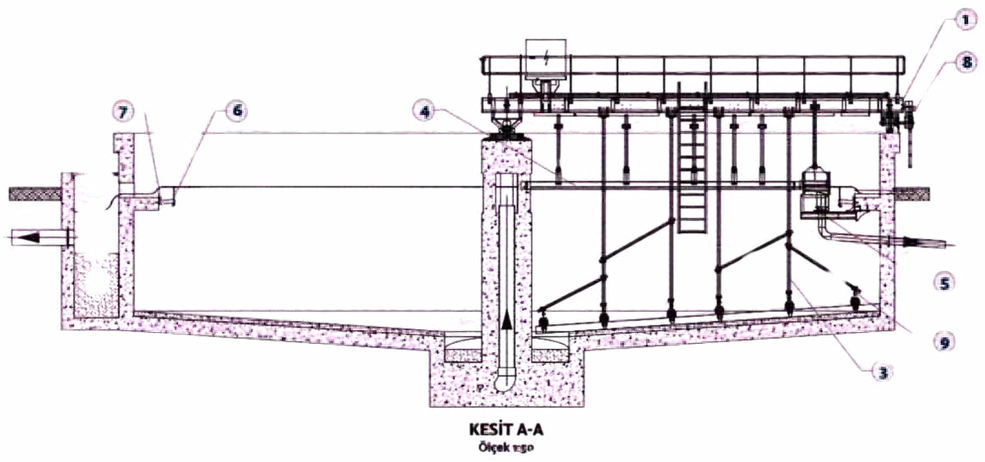
Applications:

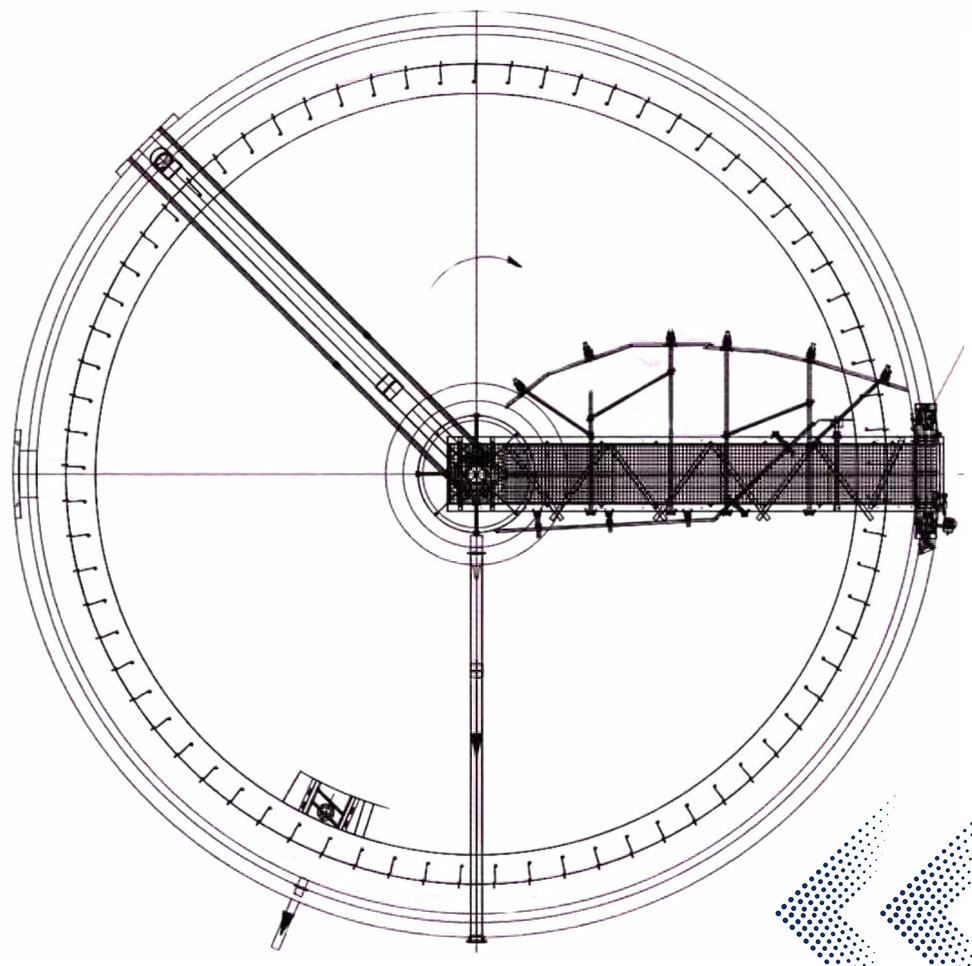
- Water treatment plants
- Domestic wastewater treatment plants
- Industrial wastewater treatment plants
- Chemical industry
- Coal industry, etc.
- Metallurgical industry

Performance Data:

- Diameter up to 30 meters
- Speed: ranging from 1.5 m/min to 3 m/min

	Fixed Bridge Circular Clarifier Components	Usable Materials
1	**Shaft**	Carbon steel or stainless steel grade: AISI 304, AISI 304L, AISI 316, AISI 316L, AISI 316Ti, DUPLEX or SUPER DUPLEX
2	**Base scraper chassis**	Carbon steel or stainless steel grades: AISI 304, AISI 304L, AISI 316, AISI 316L, AISI 316Ti, DUPLEX, or SUPER DUPLEX
3	**Scraper blades**	Cord Fabric, Rubber
4	**Picket fences**	Carbon steel or stainless steel grades: AISI 304, AISI 304L, AISI 316, AISI 316L, AISI 316Ti, DUPLEX, or SUPER DUPLEX
5	**Tension rod or Tie rod**	A2, A4
6	**Drive unit or Drive group**	– according to the manufacturer's standard
7	**Fasteners or Connecting elements**	A2, A4, DUPLEX, or SUPER DUPLEX





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Scrapers:

large tanks where water flows very slowly to facilitate the settling of particles or flocs.

In treatment plants, scrapers are used to remove settled or floated solids from the system and are utilized in many stages of the treatment process, including:

- Sand and oil separation
- Primary sedimentation
- Final sedimentation
- DAF (Dissolved Air Flotation)
- Sludge thickening

NUR GROUP CEVRE offers a wide range of alternatives for various types of bridges in the scrapers it designs in circular or linear form, depending on the geometry of the basin.

Scrapers are categorized based on bridge lengths and types, scraping methods, and operating modes.

NUR GROUP CEVRE designs scraper equipment based on static calculations and engineering expertise.

Calculations tailored to sludge loads and volume ensure a robust and reliable operation process.

As a result, there are no dead zones left in sedimentation basins or thickening tanks.

According to bridge length:

- Full span
- Half span
- Portable

According to bridge type:

- Profile
- Panel
- Lattice
- Pipe
- Box

According to scraping type:

- Suction
- Slatted (or Chain Scraper)
- Pickett Fence Type

By mode of operation:

- Center-driven
- Edge-driven (End-driven)
- Linear

Circular Scrapers:

In sludge scrapers designed for circular tanks, either a center-driven or an edge-driven mechanism is used.

This mechanism depends on the process, tank diameter, design, and sludge loads.

Circular scrapers can be categorized into various classes.

Based on the drive type, these scrapers are classified as:

Center-driven scrapers with a fixed bridge

Edge-driven scrapers with a rotating bridge

The length of a rotating bridge can be equal to the tank diameter or a fraction of it.

In sludge removal, the solid load of the treatment plant is a determining factor.

The sludge accumulated at the bottom can either be scraped toward the sludge hopper or pumped through suction pipes into the central pipeline system.

Multiple options are available for both methods.

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Center-Driven Fixed Bridge Circular Scrapers:

Center-driven scrapers are manufactured to be mounted on a column or a fixed bridge.
Fixed concrete or steel bridges are commonly used.
A center-driven motor, shaft, and paddles are utilized.
The scraper is mounted on the tank floor bed. The sludge is collected in the sludge cone with the help of paddles.
The shaft is fixed to a bearing-supported conical bottom construction.
Scraper paddles are attached to the paddle arm, and easily replaceable scraping rubber strips are used on the paddles.

Bridge-mounted:

In the bridge-mounted arrangement, there is a bridge spanning the entire tank diameter with a drive unit located at its center.
At the output of the drive unit, there is a shaft connected to the main rake drive shaft or the torque tube.

Column-mounted:

Column-mounted center drive requires a column or support structure at the center of the sedimentation tank.
A drive unit is placed on this column.
The drive unit has an output drum to which a rotating rake cage is attached, supporting the rake arms.

NUR GROUP CEVRE also manufactures the center-driven fixed bridge circular clariflocculator, which is widely used in water and wastewater treatment plants.
The clariflocculator combines flocculation and clarification functions in a single unit and is specially designed to treat screened and sand-removed industrial wastewater. It facilitates coagulation, flocculation, and sedimentation processes by utilizing different zones of the clarification unit to achieve optimal performance.
It consists of two tanks: the inner tank acts as the flocculation unit, while the outer tank serves as the clarification unit.
In this type of clariflocculator, the drive unit is fixed at the center of the bridge, and the tubular central shaft is connected to the drive unit.
The shaft has two structural rake arms mounted on it, equipped with blades to scrape the sludge accumulated at the bottom of the tank.

Removal of settled sludge can be achieved by the following methods:

- Scraper blades
- Sludge pumps
- Suction system

Features and Benefits:

- Long service life
- Very high reliability
- Effective scraping
- Easy installation and transportation
- Very high resistance to sludge loads
- Robust and bend-resistant scraper bridge
- Fast and error-free installation
- Low operating and maintenance costs

Performance Data:

- Diameter up to 28 meters
- Scraper speed: between 1.2 m/min and 3.6 m/min

Applications:

- Domestic wastewater treatment plants
- Circular primary and secondary sedimentation tanks
- Industrial wastewater treatment plants
- Circular primary and secondary sedimentation tanks

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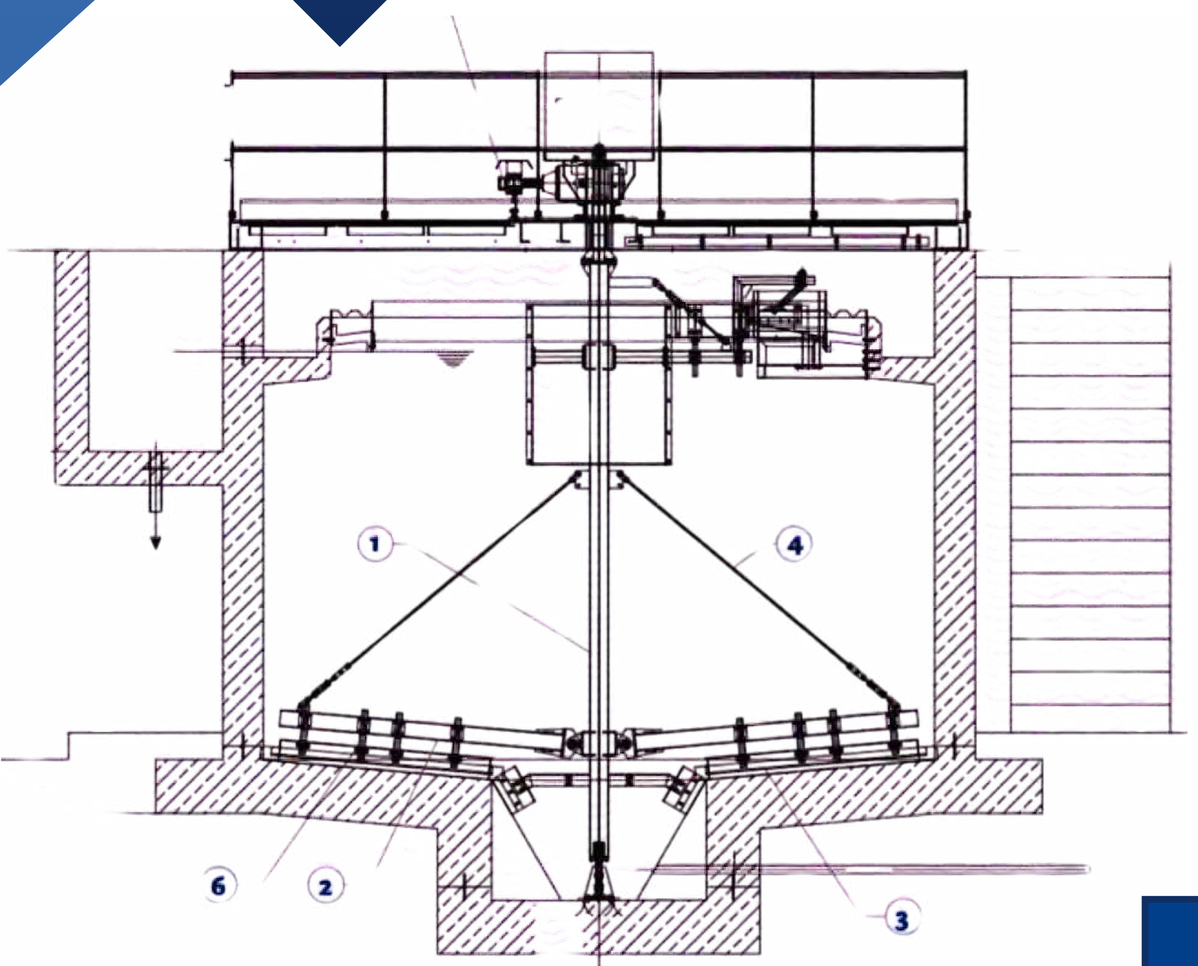

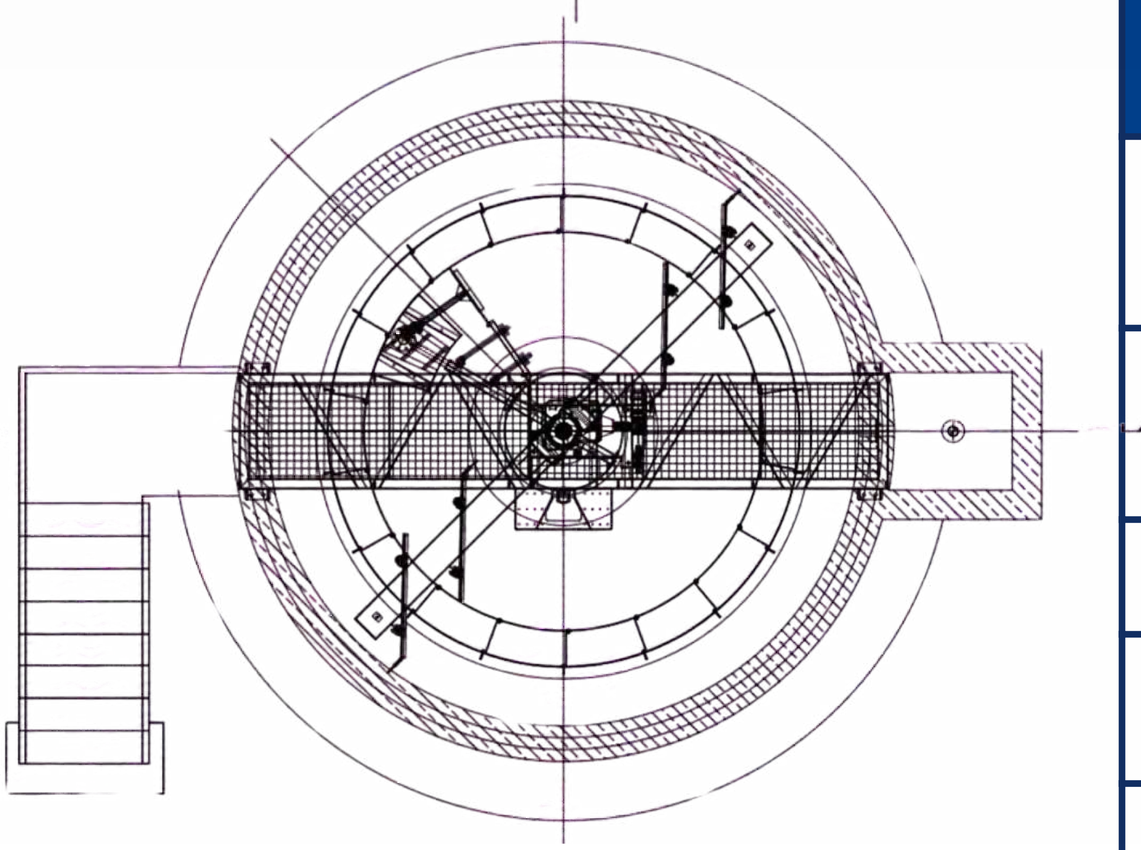

Operating Principle:

The center-driven fixed bridge circular scrapers developed by NUR GROUP CEVRE consist of arms attached to a central pipe.

These arms include welded, angled scraper blades located beneath the bottom scraping arms.

The drive unit is mounted on the fixed bridge, and the gear mechanism is directly connected to the central shaft, which is equipped at its lower end with a base bearing to prevent wear caused by friction.

During operation, the scrapers remove settled sludge from the circular sedimentation tank.

Materials that do not directly settle into the collection silo are pushed toward the central silo using rotating blades.

Clean water is collected in the collection channels, while the sludge accumulated in the silo is discharged from the system through a drain pipe

	Centrally Driven Circular Scraper Parts with Fixed Bridge	Usable Materials
1	**Shaft**	Carbon steel or stainless steel grade: AISI 304, AISI 304L, AISI 316, AISI 316L, AISI 316Ti, DUPLEX or SUPER DUPLEX
2	**Base scraper chassis or Floor scraper chassis**	Carbon steel or stainless steel grade: AISI 304, AISI 304L, AISI 316, AISI 316L, AISI 316Ti, DUPLEX or SUPER DUPLEX
3	**Scraper blades**	Neoprene
4	**Drive group or Drive assembly**	– according to the manufacturer's standard
5	**According to manufacturer's standard**	8.8, A2, A4

Accessories and Optional Parts:

- Steel bridge
- Control panel
- Oil reservoir for central bearing
- Mechanical torque limiter
- Inlet deflector
- Weir – Weir channel
- Surface scraper
- Foam submersible curtain
- Bridge cable installation
- Bridge lighting

- Foam scraper
- Conical scraper
- Ladder
- Chemical anchors

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Peripheral Driven Rotary Bridge–TypCircular Scraper:

NUR GROUP CEVRE's peripheral–driven rotary bridge–type circular scrapers primarily consist of a central axial structure with a power distribution system mounted at the center of the sedimentation tank, along with a traveling bridge

The removal of settled sludge can be achieved by the following methods:

- Scraper blades
- Sludge pumps
- Suction system

In the system designed with scraper blades, the peripheral–driven rotary scrapers remove the settled sludge using scraper blades located at the center of the sludge collection pit. The bridge mounted on the central concrete structure is manufactured from standard profile construction to withstand static and dynamic loads. The sludge is scraped off by a rotational movement at a peripheral speed ranging between 2 to 4 cm/s and transferred to the sludge cone. Polyamide gears, plastic scrapers located beneath the sludge scraper, and articulated arms ensure smooth rotational movement of the bridge. In circular tanks, wastewater can enter the tank either from the center or from the periphery

Suction System:

The suction system is widely used in applications where the tank bottom is flat or very shallow, or where process constraints allow only a short retention time.

Suspended solids in the incoming water settle to the bottom of the sedimentation tank, and the settled sludge is drawn from the bottom by suspended suction heads mounted on continuously rotating, peripheral–driven scraper bridges.

Suction flow pipes discharge the extracted liquid into a semi–submersible recovery tank mounted on the bridge.

Flow regulation at various suction levels is possible using telescopic valves.

A siphon mechanism is present in the system that transfers sludge from the recovery tank to a fixed circular sludge withdrawal trough.

Scrapers equipped with suction systems offer numerous advantages...

It is as follows:

There is no need for a central sludge collection silo or an inclined tank bottom, which makes reasonable civil works sufficient for the system. The design allows for deeper side walls, enabling the utilization of different sedimentation flow patterns within the tank, thereby improving performance.

Source–based separation reduces sludge age within the tank and optionally allows the outer section of the sludge blanket to be removed to prevent the movement of suspended solids toward the weirs.

Semi–bridge scrapers:

Peripheral–driven mechanisms require a static support in the center of the tank. A bearing located at the top of this static support allows the entire bridge to rotate from the tank center to the wall. A group of scraper arms is suspended beneath the bridge.

Full–bridge scrapers:

Full–bridge scrapers also require a static support or base at the tank center. Unlike the semi–bridge scraper, the full bridge spans the entire diameter of the tank, including the central area where the bearing is located.

Both ends of the full bridge must be driven, and a load balancing mechanism is needed to ensure uniform wear along both gears. In this design, the settled sludge is discharged via pipes.

NUR GROUP CEVRE also manufactures peripheral–driven rotary bridge–type circular clariflocculators, which are commonly used in water and wastewater treatment plants.

The clariflocculator is a preferred and cost–effective piece of equipment for clarification and sedimentation of solids within an integrated system.

This type of clariflocculator features two separate drive units—one for sedimentation (center–driven) and the other for clarification (peripheral–driven).

A central inlet distributes the flow radially within the sedimentation unit.

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Features and Benefits:

- Long-lasting and reliable design
- High scraping efficiency
- Easy and low maintenance
- Easy to transport and quick to install
- High sludge handling capacity
- Easily applicable to existing units
- Low operating and maintenance costs

Applications:

- Domestic wastewater treatment plants
- • Circular primary and final sedimentation tanks
- Industrial wastewater treatment plants
- • Circular primary and final sedimentation tanks

Performance Data:

- Diameter up to 56 meters
- Scraper speed: between 1.2 m/min and 3.6 m/min

Operating Principle:

NUR GROUP CEVRE Peripheral-Driven Rotary Bridge Circular Scrapers are equipment used for scraping sludge accumulated at the bottom of circular sedimentation tanks and removing floating foam at the system outlet.
The bridge can be manufactured as a half or full bridge according to customer demand, operated by a motor and gear driven peripherally.
The bottom scrapers collect the settled sludge into a central silo, while surface scrapers simultaneously remove the foam and direct it to the foam hopper.

	Peripheral-Driven Rotary Bridge Circular Scraper Parts	Usable Materials:
1	**Bridge**	Carbon steel or stainless steel grades: AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, Aluminum
2	**Spark plug**	Carbon steel or stainless steel grades: AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, Aluminum
3	**Bottom scrapers**	Carbon steel or stainless steel grades: AISI304, AISI304L, AISI316, AISI316L, AISI316Ti
4	**Surface Scrapers**	Carbon steel or stainless steel grades: AISI304, AISI304L, AISI316, AISI316L, AISI316Ti
5	**Foam hopper**	Carbon steel or stainless steel grades: AISI304, AISI304L, AISI316, AISI316L, AISI316Ti
6	**Weir**	Carbon steel or stainless steel grades: AISI304, AISI304L, AISI316, AISI316L, AISI316Ti
7	**Submerged curtain**	Carbon steel or stainless steel grades: AISI304, AISI304L, AISI316, AISI316L, AISI316Ti
8	**Drive unit**	According to manufacturer's standards
9	**Fastening elements**	8.8, A2, A4

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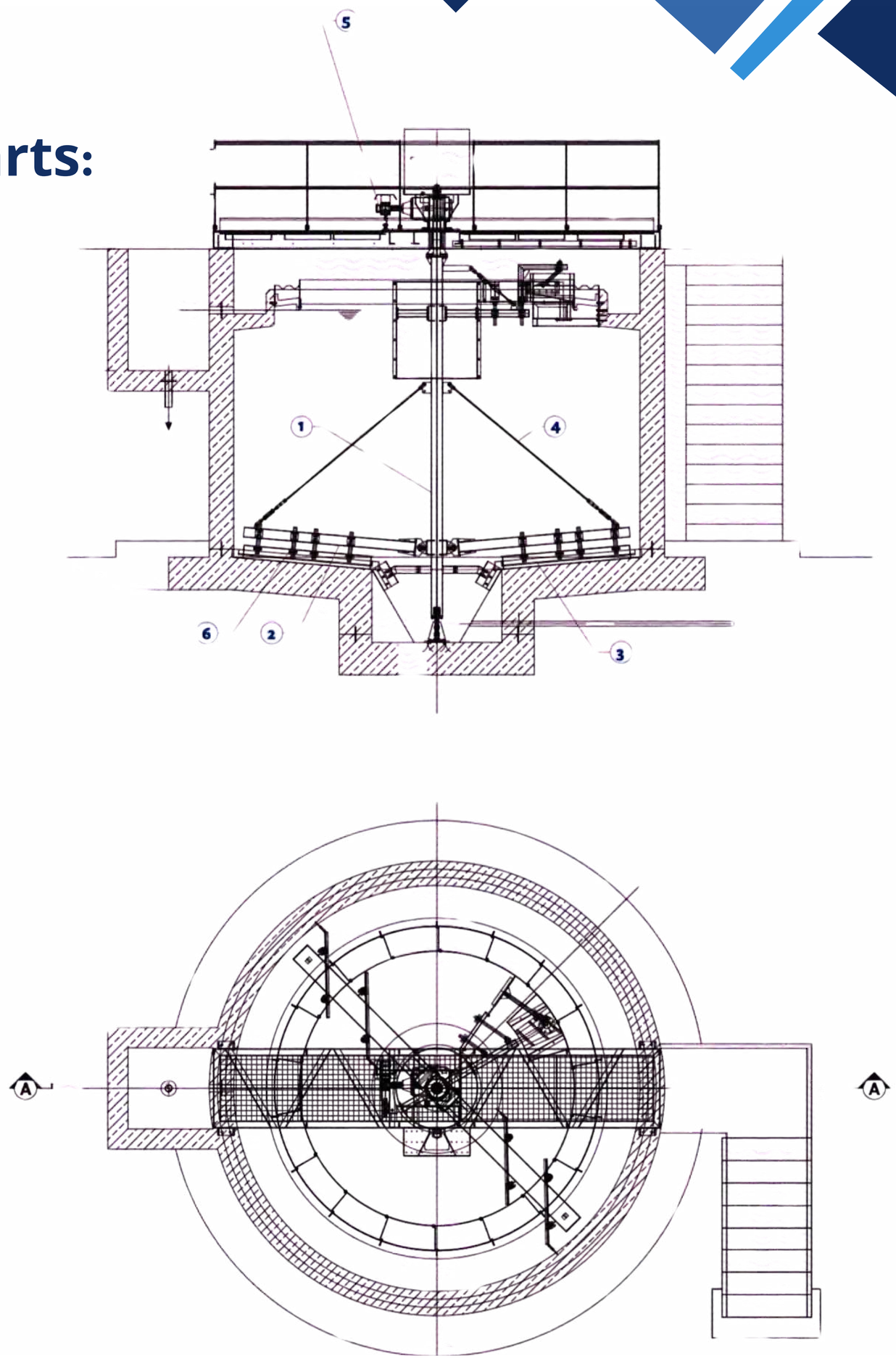
Accessories and Optional Parts:

- Control panel
- Surface scraper
- Foam scraper
- Mechanical torque limiter
- Anti–slip proximity sensor
- Weir – Weir channel
- Weir channel cleaning brush
- Submerged curtain
- Foam pump hoist
- Ladder
- Junction box
- Motor protection cover
- Integrated emergency stop button
- Bridge cable installation
- Lubrication unit for central bearing
- Inlet water pipe
- Foam discharge pipe
- Foam pump
- Foam funnel
- Stengel arm group
- Inlet deflector
- Sludge bed level sensor
- Bridge lighting
- Parking switch
- Chemical anchors



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Linear Scrapers:

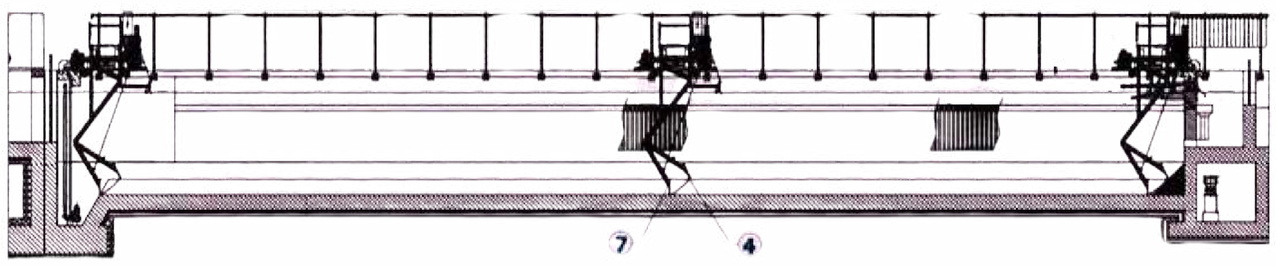
Linear scrapers are used in rectangular–section sedimentation tanks for the purpose of removing sludge or sand. This equipment scrapes the sludge or sand in a linear direction and transfers it to the sludge collection silo at the end of the tank. At the same time, surface scraping blades carry foam or oil to the discharge point on the opposite side.

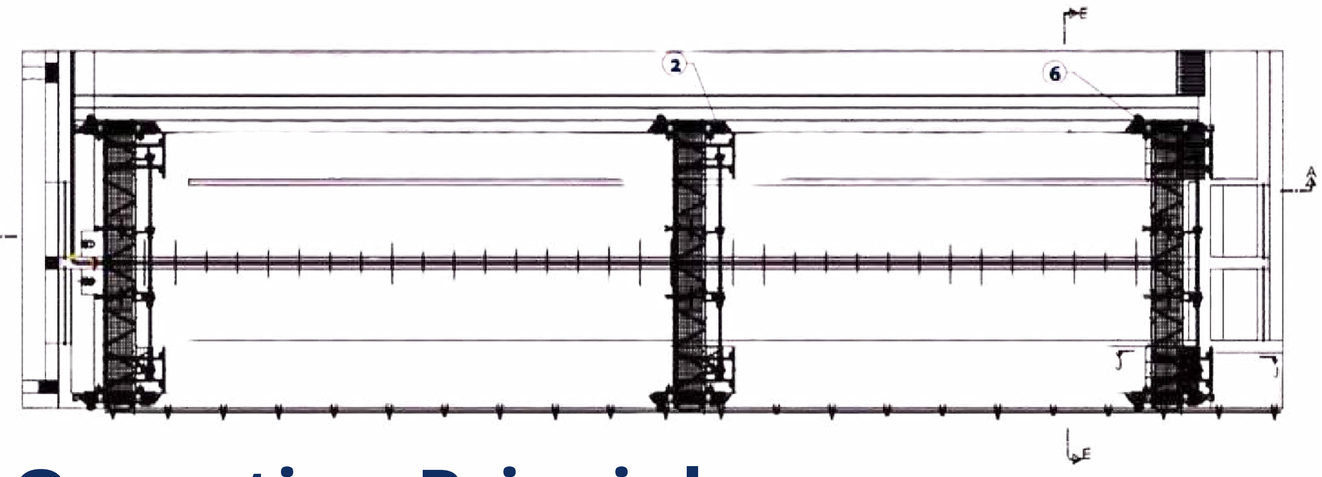
The removal of settled materials can be achieved depending on the type of substance in the following ways:

For settled sand:
- Scraper blades
- Sand pumps
- Air–lift system

For settled sludge:
- Scraper blades
- Sludge pumps
- Suction system

Surface foam is generally directed in the flow direction to the outlet end of the tank, where it is removed from the system.
The bridge is mounted on drive units located on both sides, each equipped with either guide wheels or rail–mounted wheels.
The speed reduction unit includes a gear to ensure the necessary slow motion, and optionally a torque limiter.
Power supply is provided via a cable drum or a cable trolley.





Features and Benefits

- Robust and durable design
- Low wear and tear due to only slow–moving parts in the system
- Quick and easy installation, even in existing tanks
- Effective separation of liquid and solid phases
- Low energy consumption
- High efficiency
- Single or multiple tanks

Applications:

- Water treatment plants
- Domestic wastewater treatment plants
- Biological treatment facilities
- Industrial treatment facilities
- Pulp and paper industry
- Iron industry, etc

Performance Data:

- Width up to 24 m
- Scraper speed: between 1 m/min and 3 m/min

Operating Principle:

Nur Group Cevre linear scrapers can be installed in circular tanks to remove sand particles settled at the bottom of grit chambers or to remove sludge accumulated at the bottom of primary or final sedimentation tanks. In the traveling bridge mechanism, as the amount of sand or sludge accumulated on the tank floor increases, the scraper blades mounted on the traveling scraper bridge automatically engage in the opposite direction of the wastewater inlet, transferring the settled particles to the silo or waste discharge channel.

In the scraper blade operation method, the blades are lowered to scrape the settled materials from the outlet end to the tank inlet. The scraper blades are then lifted back to the water surface via a lifting gear to return to their starting position. This return movement occurs at twice the speed of the scraping process.

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Accessories and Optional Parts:

- Motorized cable drum with plastic hose
- Spring-loaded cable drum
- Wheel motion monitoring mechanism
- Rail system instead of wheels
- Bridge-mounted control panel
- Oil and sand separation wall
- Foam discharge channel
- Bridge lighting
- Sand suction system via submersible or air-lift pump
- Snow sweeping and de-icing equipment
- Cable holding chain
- Alternative voltage and frequency
- Alternative motor protection classes
- Scraper blades liftable to the top edge of the tank
- Torque limiter

	Linear Scraper Parts:	Available Materials:
1	**Bridge**	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX, Aluminum
2	**Spark plug**	Carbon steel or stainless steel grade, such as AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX, or aluminum
3	**Surface scraper**	Carbon steel or stainless steel grade, such as AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
4	**Floor scraper**	Carbon steel or stainless steel grade, such as AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
5	**Staircase or ladder**	Carbon steel or stainless steel grade, such as AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX, or Aluminum
6	**Drive group or drive unit**	- according to the manufacturer's standard
7	**Fastening elements or connecting components**	8.8, A2, A4

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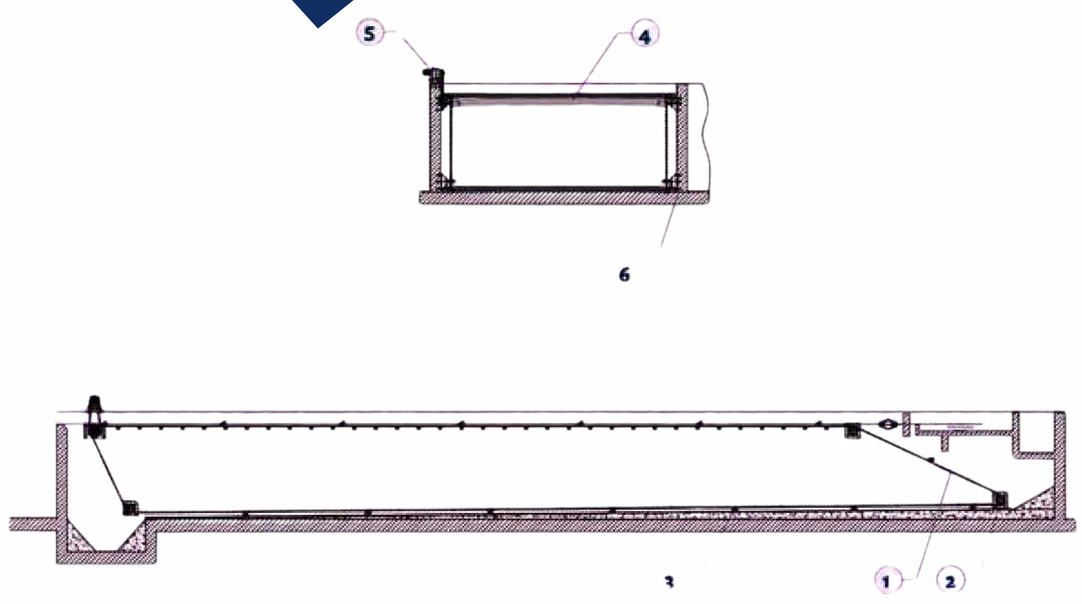
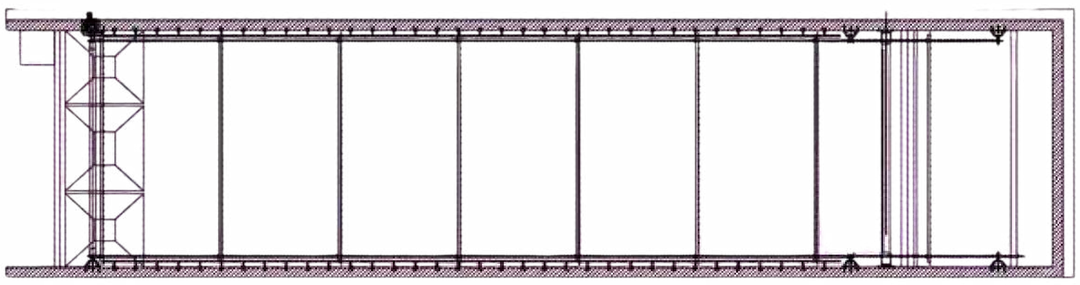
Chain scrapers:



Chain scrapers are used in rectangular–section channels like linear scrapers. The scraping blades are mounted between two separate chains installed between the shaft and gears located at the corners of the channel. Thus, with the rotation of the shaft driven by the drive unit, the chain performs an endless rotational movement, cleaning the sludge accumulated at the bottom. The chain scraping system scrapes the sludge from the bottom and transfers it to the side silo, while scraping the materials on the surface of the basin and transferring them to the side channel. The chain scraper consists of a geared motor control group, drive shaft, drive chains, idle shaft, and scraping blades attached to the pulling chain. The motion of the geared motor is transmitted to the shaft via two lateral mirrors, activating the two chain sprockets. There is a transmission group in the opposite direction that helps tension the chain. The chain is kept in the correct position thanks to special guides. Upon request, chain scrapers that clean only the bottom or the surface of the basin with two independent scrapers can also be supplied.



Operating Principle:

NUR GROUP CEVRE Chain Scrapers are used to clean sludge from circular–section sedimentation tanks throughout operation, even if the sludge quantity is very high.

On each side of the sedimentation tank, there is an endless drive chain operating over two, three, or four drive sprockets. A pair of drive sprockets mounted on a common shaft is driven by a motor. Scraper blades placed between the chains scrape the sludge accumulated at the bottom and transfer it to a silo. During rotation, the surface foam is carried to the foam channel.

Accessories and Optional Parts:

- Fixing rings
- Foam trough for foam discharge
- Inlet and outlet systems
- Central lubrication system for bearings
- Special accessories upon request

	Linear Scraper Parts:	Available Materials:
1	**Chain**	Carbon steel or stainless steel grade, such as AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
2	**Gears**	Carbon steel or stainless steel grade, such as AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX.
3	**Scraper blades**	Carbon steel or stainless steel grade, such as AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX or GRP (Glass Reinforced Plastic)
4	**Main shaft**	Carbon steel or stainless steel grade, such as AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX.
5	**Drive group or drive unit**	According to manufacturer's standards
6	**Fasteners / Connecting elements**	8.8, A2, A4

Features and Benefits:

- Long service life
- Robust and durable design
- Fast and easy installation
- Low investment and operating costs
- Low wear and tear due to only slow–moving parts in the system
- High efficiency and low energy consumption

Applications:

- Water treatment plants
- Primary sedimentation process
- Chemical sludge removal process
- Domestic wastewater treatment plants
- Dissolved Air Flotation (DAF) thickening process
- Primary and final clarification process
- Industrial wastewater treatment plants
- Oil and water separation process
- Clarification process

Performance Data:

- Width up to 12 meters
- Scraper speed: between 0.9 m/min and 2.1 m/min

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TELESCOPIC FLANGED DRAW:

TELESCOPIC FLANGED DRAW: are used in tanks, lagoons, and treatment plants for drawing surface water from one holding area to another or for regulating fluid levels between tanks. Their unique design uses a siphon to move the water. In treatment facilities, one specific use of it is to control the level of effluent in settling basins. Also called Decanting Valves or Sludge Draw–off Valves, the assembly consists of a drain tube which can slip up and down inside a stationary vertical pipe. Unlike opening a gate, they will not disturb sediments on the bottom of the tank. Through a lifting device, the tube is raised and lowered to maintain the desired level within the chamber.

	Linear Scraper Parts:	Available Materials:
1	**Drive mechanism**	Hand Wheel / Gearbox / Actuator
2	**Shaft**	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
3	**Upper pipe**	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
4	**Lower pipe**	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
5	**Sealing**	Neoprene
6	**Assembly fasteners & Anchor bolts**	A2, A4 , DUPLEX or SUPER DUPLEX

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PENSTOCK:

Covers Designed for Water Applications:

NUR GROUP CEVRE is a well-known manufacturer of high-quality, high-performance water control gates, producing both standard designs and custom-made solutions tailored to customer needs for all industries. Our gates are designed by considering customer requirements, site characteristics, environmental conditions, and operational preferences. These gates are structures that control water flow. Also known as weir gates, slide gates, or shut-off valves, they are used in applications involving water, wastewater, sewage treatment plants, power generation, irrigation projects, and process facilities to regulate, divert, control levels, or isolate flow. They function as flow control and isolation valves.

Features and Benefits:

- Various material applications and sizes
- Different operation types: handwheel or gearbox
- Optional pressure seating (front/back or both directions)
- Custom size manufacturing
- Wide range of manual operation systems available
- Remote activation options
- Robust construction requiring minimal maintenance

Type	Wall-Mounted Cover	Channel-Mounted Cover	Weir Type Cover	Swing Cover
Product Specifications	Welded chassis type with self-supporting flange for mounting on a concrete wall at the end of the channel. The cover has easily replaceable gasket components	Welded U-shaped chassis type for mounting on a concrete channel fixed in grooves pre-prepared with mortar on the sides and bottom. The cover has easily replaceable gasket components.	Welded chassis type with self-supporting flange, wall-mounted. Installed at the channel outlet for level control or adjustment.	Welded chassis with side gasket assembly. Mounted on the discharge channel for level control or adjustment
Gasket	4-sided	3-sided	4-sided	3-sided
Vent	Square / Rectangular Cross-section	Square / Rectangular Cross-section	Square / Rectangular Cross-section	Square / Rectangular Cross-section
Operating Method	Manual/Electric-driven/ Power piston type	Manual/Electric-driven/ Power piston type	Manual/Electric-driven/ Power piston type	Manual/Electric-driven/ Power piston type
Application Areas	Wall-mounted installation at the pipe outlet or channel outlet for open-close flow control	Installation on an open channel, fixed with mortar to the side walls and bottom, for open-close flow control.	Wall-mounted installation at the channel outlet for level control.	Wall-mounted installation fitted to a structure matching the discharge width for level control.

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	Cover Components:	Available Materials
1	**Chassis:**	Carbon steel or stainless steel grades: AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
2	**Cover / Slide**	Carbon steel or stainless steel grades: AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
3	**Drive Shaft**	AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX veya SUPER DUPLEX
4	**Drive Mechanism**	Manual, Gear-reduced, Actuated, Pneumatic cylinder, Hydraulic
5	**Shaft protection tube (for rising shaft)**	Polycarbonate, Hot-dip galvanized, AISI304, AISI316L
6	**Bracket / Gearbox**	Aluminum, carbon steel or stainless steel grades: AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
7	**Shaft Guide**	Delrin
8	**Gasket**	Neoprene / EPDM
9	**Wedge**	POM
10	**Mounting Components**	A2, A4 , DUPLEX veya SUPER DUPLEX
11	**Connection Bolts**	A2, A4 , DUPLEX veya SUPER DUPLEX

a. Wall Mounting:

The cover is fixed to the wall using expansion or resin-type anchor bolts. It is used to close the opening in the wall or at the end of a pipe and to ensure sealing along the entire perimeter of the opening. It can be of sliding or roller type and can be arranged to provide sealing in front or back pressure systems. By installing a double gasket, sealing can be ensured on both sides of the cover when necessary

b. Channel Mounting:

The cover is specially designed to be mounted into prepared grooves. Channel covers are used to control flow in open channels; therefore, they do not have a top horizontal gasket. They are generally mounted into slots on the side walls and floor but can also be adapted to be fixed onto the wall surface if necessary. Normally, they feature a screw mechanism controlled by a gear mounted on a bridge that is part of the upper frame or operated by a handwheel. In wide cover systems, a double lifting shaft may be required.

Operating Pressure:

- **Front pressure** (the fluid pushes the cover toward the wall)
- **Back pressure** (the fluid pushes the cover away from the wall)
- **Front/back pressure** (the fluid pressure force can act in both directions).

Base Types:

- **Corrugated Base:**

(when base fixing bolts are required)

- **Embedded Base:**

(flat corridor at the base, possible dirt traps are removable)

Types of Installation:

The cover mounting type depends on design requirements.

a. Wall Mounting

b. Channel Mounting

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Shaft Types:

a. Rising Shafts
b. Non–rising Shafts

a. Rising Shafts:

The operating equipment includes a nut on a threaded shaft. The nut is turned by the operator, and as the threaded shaft moves within the nut, the cover rises or lowers accordingly. The threaded part of the shaft does not submerge and is fully accessible for maintenance and operation purposes. This operating method can be carried out directly through the cover frame or remotely from ground level.

b. Non–rising Shafts:

A threaded nut is attached to the threaded shaft of the cover door. Then the threaded shaft is operated by the operator turning it within the nut. Through this movement, the shaft raises and lowers the cover. The threaded shaft does not rise; it remains inside the cover frame and submerges later.

According to Operating Method:

a. Manual Operation
b. Mechanized Operation

a. Manual Operation:

Manual operation of covers is recommended when the operating frequency, the time required for full opening and closing, and the torque needed to operate the cover are low. Manual operation can be carried out with either a non–geared or geared lifting mechanism. The choice of lifting mechanism type depends on the lifting capacity required for each cover.

B. Mechanized Operation:

Mechanized operation of covers is recommended when the torque required to open the cover or the operating frequency is high, and when rapid operation of the cover is necessary.

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BELT CONVEYOR:

Belt conveyors are an excellent, cost–effective, and simple method for transporting materials from one point to another. Thanks to the simple design of the flat moving belt, these conveyors can be used for transporting materials of various sizes, shapes, and weights.

Belt conveyors are among the most commonly used models for transporting bulk materials. They are used in water and wastewater treatment plants to transfer stones, dewatered sludge, or similar screened materials out of service for disposal.

This type of equipment operates in a stable and quiet manner, is built with high–quality manufacturing, and is highly reliable. It can be installed horizontally or at an incline (up to 25°).

Nur Group Cevre Belt Conveyors primarily consist of a frame, conveyor belt, belt scraper, drive drum, tension drum, drums, and drive unit.

Features and Benefits:

- Custom design and engineering tailored to each client's specific application
- Modular design in various length/width dimensions
- Adjustable inclination angle on the machine frame
- Capable of covering long distances in a single operation
- Can transport materials horizontally or vertically on an inclined plane
- Materials do not mix during transport
- Lower energy consumption compared to screw conveyors or sludge pumps
- Easily integrated into the facility, enhancing existing material handling systems
- Long service life
- Side protection mechanism
- Optional cover for odor control
- Reverse movement feature
- Optional water collection tray for safe operation and to prevent waste spillage

Technical Specifications	
Belt Width	400 mm – 800 mm
Conveying Distance	Up to 25,000 mm
Inclination Angle / Slope Angle	0o– 25o

Applications:

- Water treatment plants
- Domestic wastewater treatment plants
- Industrial wastewater treatment plants
- Automotive industry
- Food and beverage industry
- Petrochemical industry
- Chemical industry
- Cement industry
- Mining industry
- Pulp and paper industry, etc.
- Solid waste processing facilities
- Composting and incineration plants

Accessories:

- Emergency stop button on the equipment
- Safety rope
- Side guard
- Front and rear guard
- Top guard
- Torque limiter

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Operating Principle:

Belt conveyors basically consist of two end drums and a conveyor belt. The rotating drum that drives the conveyor belt is called the drive drum, and there is also a tension drum in the system that tightens the belt to ensure efficient operation. The conveyor belt moves around the drive drum and tension drum and is supported by numerous idler rollers. During operation, the drive drum is powered by a geared motor, and the conveyor belt moves due to the friction force between the belt and the drive drum. With this system, materials are transferred to the discharge point. Side covers prevent the transferred materials from falling off.

	Belt Conveyor Parts	Available Materials:
1	**Chassis**	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
2	**Belt**	Rubber
3	**Belt Scraper**	Polyethylene
4	**Drive drum**	Carbon Steel
5	**Tension Drum**	Carbon Steel
6	**Drums**	Polypropylene
7	**Drive group**	According to manufacturer's standard
8	**Connection elements**	A2, A4, DUPLEX or SUPER DUPLEX

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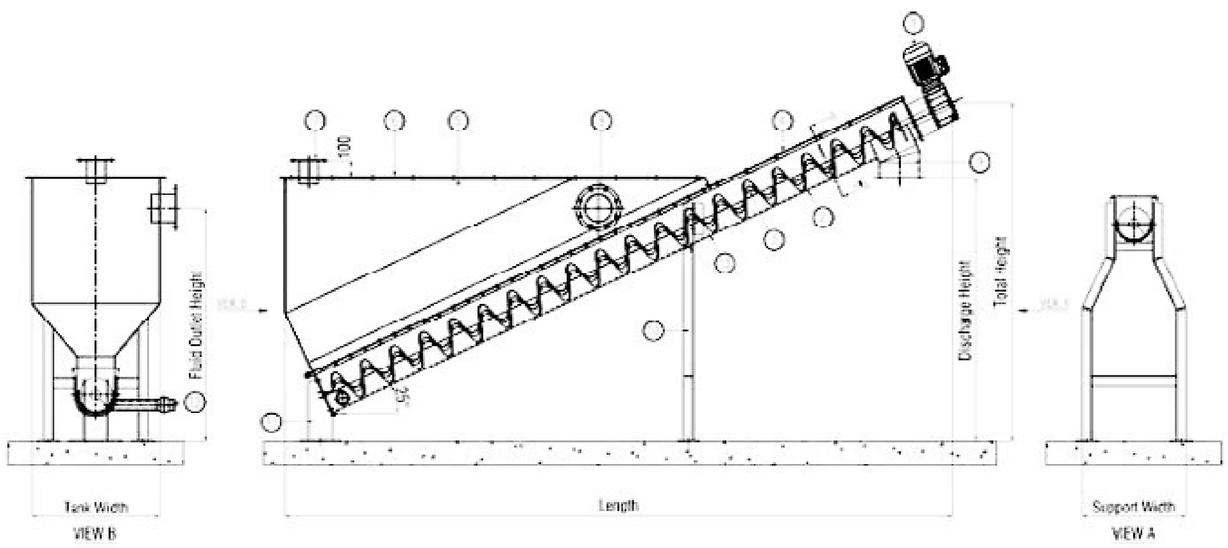
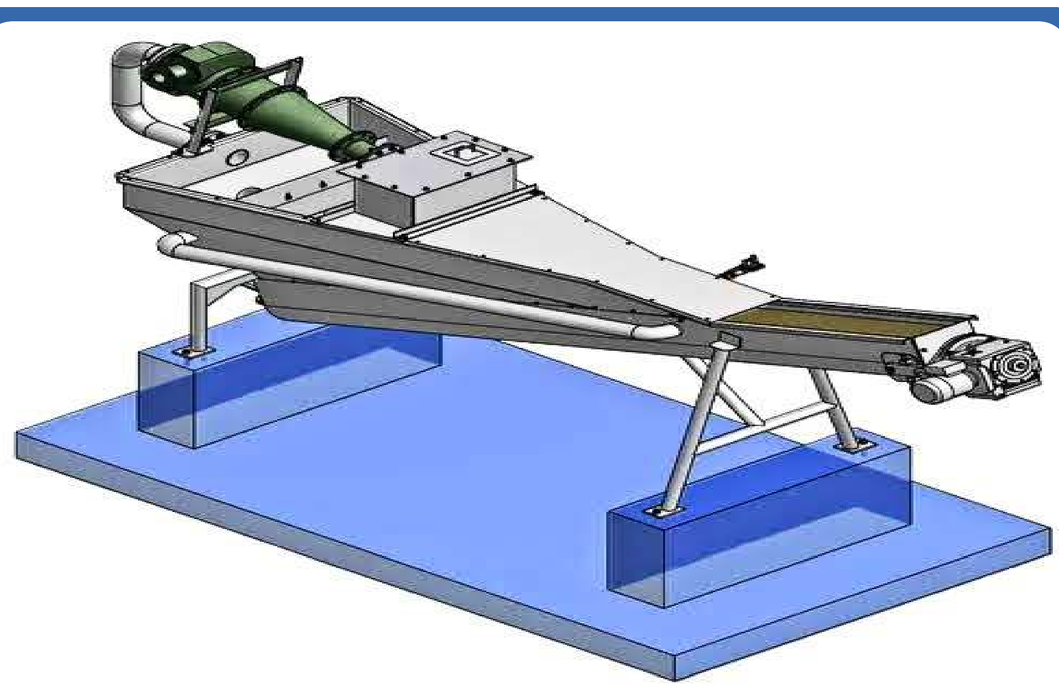
GRIT CLASSIFIER:

Prevents wear and tear on mechanical equipment and pumps inside the facility by retaining and separating sand present in the wastewater at the facility's inlet point.

Sand separators, designed to separate solid materials in sandy water collected via sand scrapers, consist of a conical-bottom tank and a screw conveyor. The motor-driven screw conveyor transports the sand accumulated at the tank bottom and empties it into a container placed at the discharge outlet.

Product Features:	
Material	AISI 304 – 316
Capacity	12–35 liters per second (lt/s)
Power	0.25–0.75 kW
Grit Discharge	1 – 3 m3/h
Water Volume	1.2 – 4.2 m3/h
Water Surface	2.3 – 5.0 m3/h
Spiral Diameter	200 mm – 400 mm
Spiral Length	2000 mm – 4000 mm





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Aerators:

Section A: Surface Aerators with Helical Float System:

General Description and Purpose of Use:

Helical floating surface aerators are typically used in the equalization tanks of domestic/industrial wastewater in treatment plants to ensure mixing. In biological wastewater treatment plants, they are used in aeration tanks to provide the oxygen necessary for the survival and activity of microorganisms.

Helical floating surface aerators consist of a drive unit, float, shaft, rope, and helical blades.

Operating Principle of the Equipment:

Helical floating surface aerators are kept afloat on the wastewater surface with the help of a float. The floating aerator is fixed in position in the basin by being tied to anchoring points using ropes. The shaft, positioned vertically to the wastewater surface and connected to the drive unit, along with the coupled helical blades, rotates at high speed to lift the wastewater to the surface. The wastewater is carried upward by the helical blades and hits a splash plate, causing it to scatter. Through this scattering effect, the wastewater comes into contact with atmospheric oxygen, thus enabling aeration.

Technical Specifications:

- Thanks to the impact plate under the motor and the helical blades, water is sprayed outward. This structure enables more efficient aeration of the water.
- Operates at a vertical angle and partially submerged in water.
- Allows operation suitable for the varying wastewater levels in the tank.
- Due to the hexagonal structure at the bottom, the aerator does not topple when the tank is emptied; it rests on the ground.

Advantages:

- High-efficiency aeration
- Easy transportation and installation
- Ability to monitor and control the system via SCADA
- Start-stop operation capability controlled by oxygen meter
- Easy maintenance and low maintenance cost
- Suitable for outdoor operation
- Long operational lifespan
- Economical and durable design
- Capacity-specific design based on tank volume and oxygen demand

Accessories:

- Float Securing Rope
- Oxygen Meter
- Frequency Inverter
- Emergency Stop Button
- Local Power and Control Panel

Indicates optional accessories.

Material Details:

- **Float**: Manufactured according to DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).
- **Helix**: Manufactured according to DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).
- **Impact Plate**: Manufactured according to DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).

"Different material selections can also be made upon customer request."

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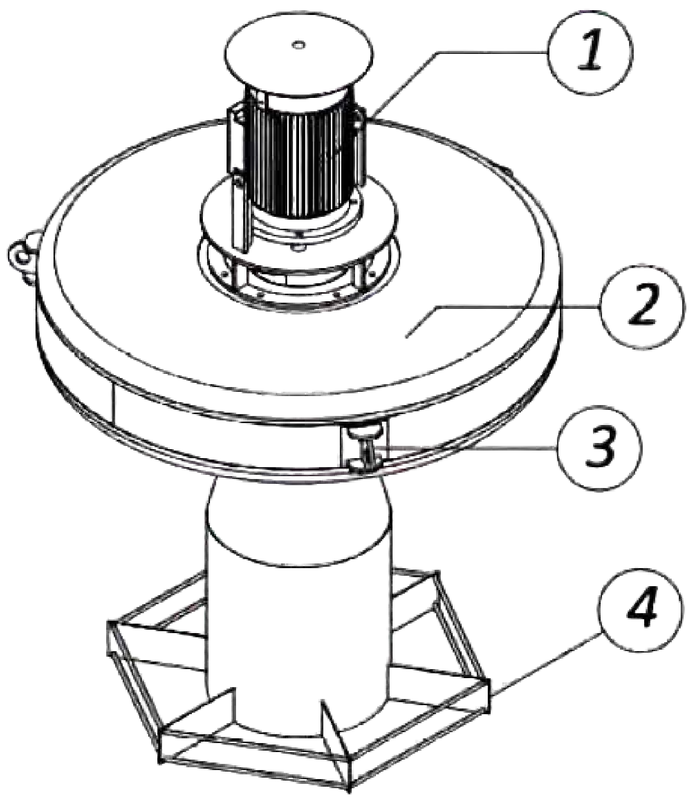
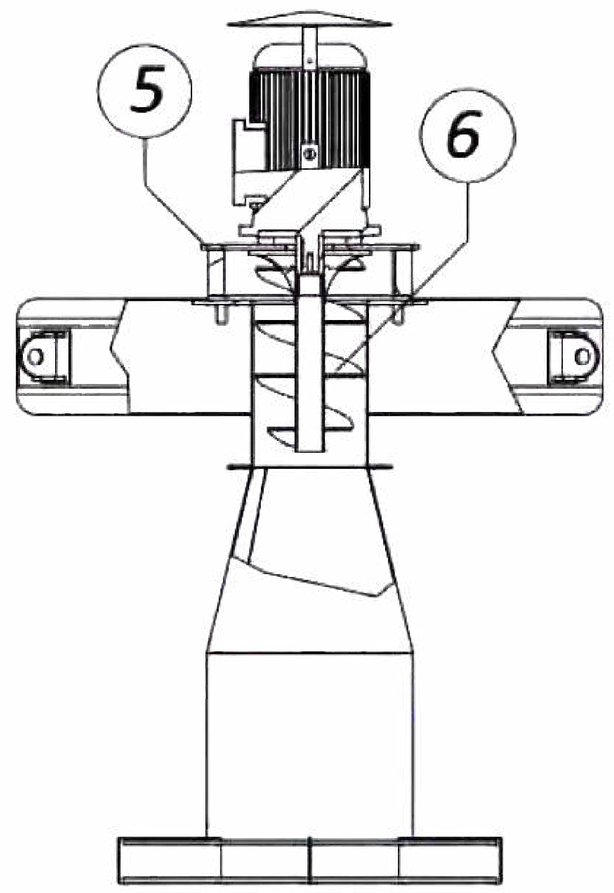




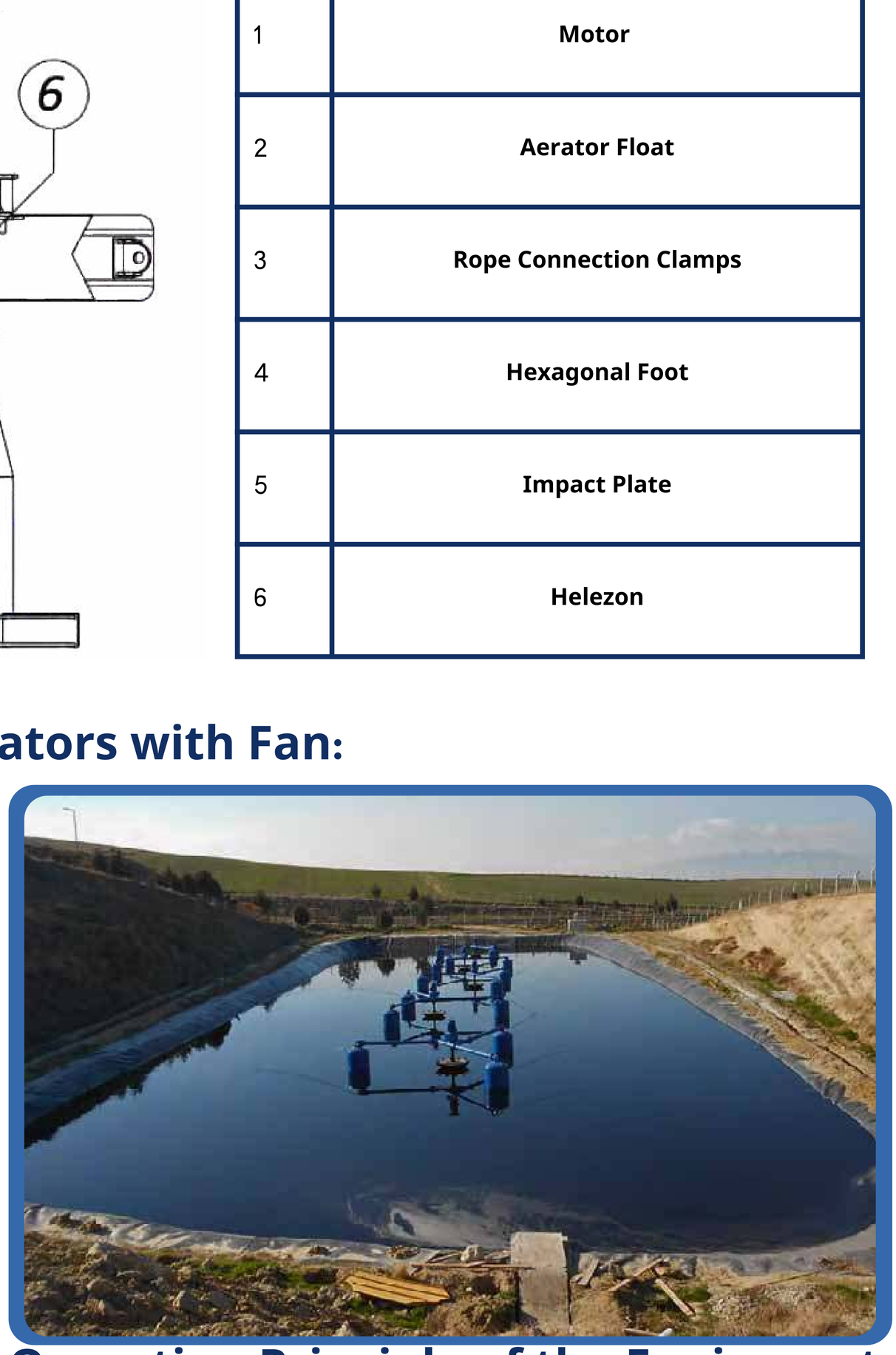
	Part Name:
1	**Motor**
2	**Aerator Float**
3	**Rope Connection Clamps**
4	**Hexagonal Foot**
5	**Impact Plate**
6	**Helezon**

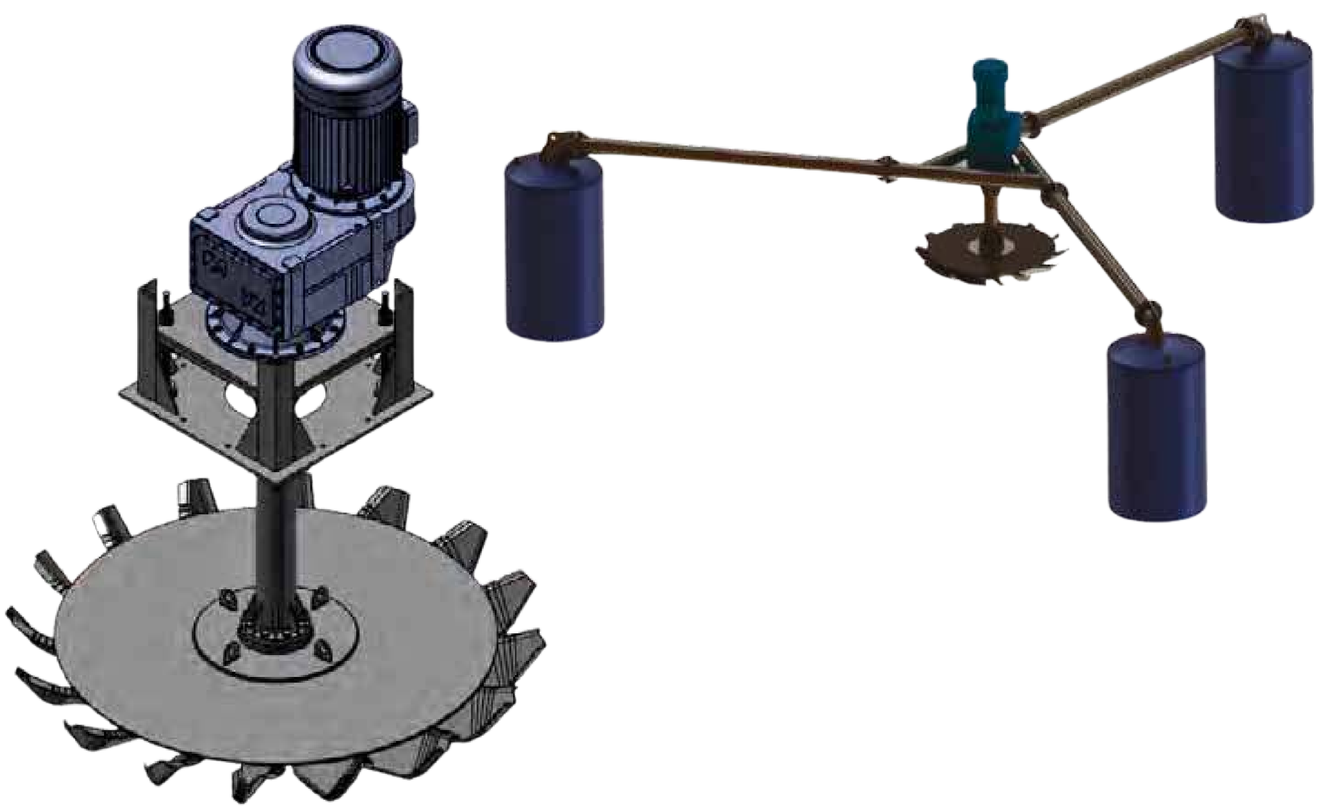
Section B:

Fixed–Type and Floating–Type Surface Aerators with Fan:

General Description and Purpose of Use:

In high–capacity wastewater treatment plants, this type is preferred because it cools the wastewater by spray technique and provides a high amount of oxygen from a single equipment. It supplies the necessary oxygen to the activated sludge in domestic or industrial wastewater in aeration basins and prevents its settling. Typically, buoyant fan–type surface aerators are favored in lagoons. Additionally, in balancing basins containing domestic or industrial wastewater, it promotes water movement with low energy consumption, ensuring mixing and carrying out the preliminary oxygenation process.





Operating Principle of the Equipment:

Fan surface aerators are classified according to their installation method as fixed type and floating type fan surface aerators. Fixed type fan surface aerators consist of the drive unit, shaft, fan, and mounting frame, while floating type fan surface aerators consist of the drive unit, shaft, fan, float system, and cables that secure the float. Fan surface aerators operate by the rotation of the fan which sprays the wastewater from the surface into the air as fine droplets. This ensures contact between water droplets and air. The droplets returning to the wastewater add oxygen to the water and cool it. This results in both complete mixing in the basin and oxygen transfer to the water.

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Technical Specifications:

- Manufactured with capacities ranging from 7.5 to 55 kW according to capacity, and can be designed for different capacities if needed.
- Mounted on the installation frame at a 90° right angle, positioned just above the wastewater surface without submersion.
- The oxygen transfer efficiency coefficient to clean water is 1.8 kg O2/kW·hour.
- Buoy-type surface aerators with fans allow easy maintenance by pulling the ropes connected to the buoy left or right without draining the tank.
- These buoy-type surface aerators can operate efficiently according to variable wastewater levels in the tank.
- Thanks to the buoy system, these aerators are prevented from tipping over and the fan from hitting the ground when the tank is emptied

Advantages:

- Capacity design suitable for pool volume and oxygen demand
- Easy transportation
- Easy installation and removal as no underwater installation is required
- Easy maintenance and low maintenance cost
- Minimum maintenance requirement without draining the pool
- Long operational life
- Capability to monitor and control system operation via SCADA
- Start-stop operation based on oxygen meter control
- Suitable for outdoor operation

Material Details:

- **Shaft**: Manufactured according to DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316) standards.
- **Fan**: Manufactured according to DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316) standards.
- **Motor/Reducer Mounting Frame or Float System:** Made from S235JR with hot-dip galvanizing, S235JR with epoxy coating, or according to DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).

"Different material options can also be selected upon customer request."

Accessories:

- Motor / Gearbox Stand
- Mounting Bridge
- Coupling
- Bearing System
- Frequency Inverter
- Emergency Stop Button
- Local Power and Control Panel

Indicates optional accessories.

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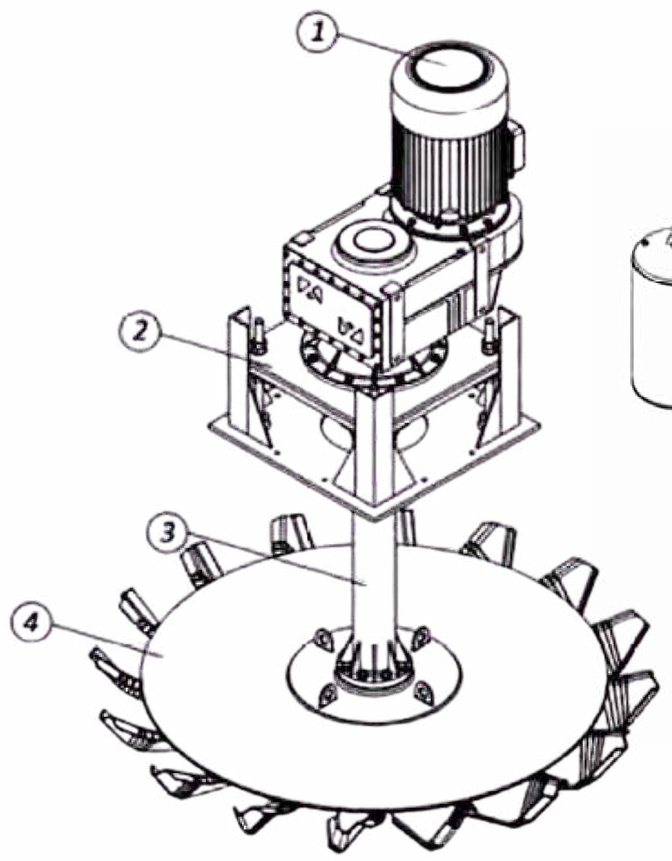
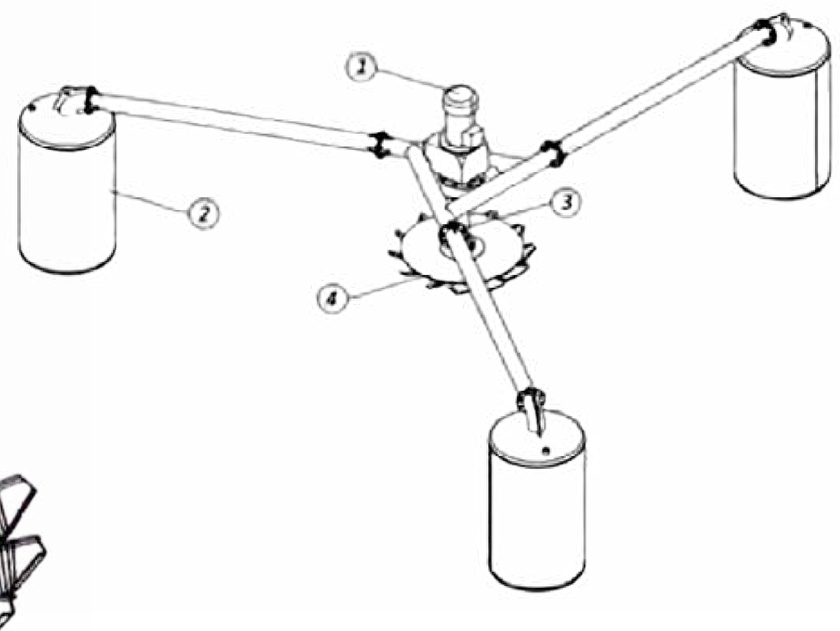
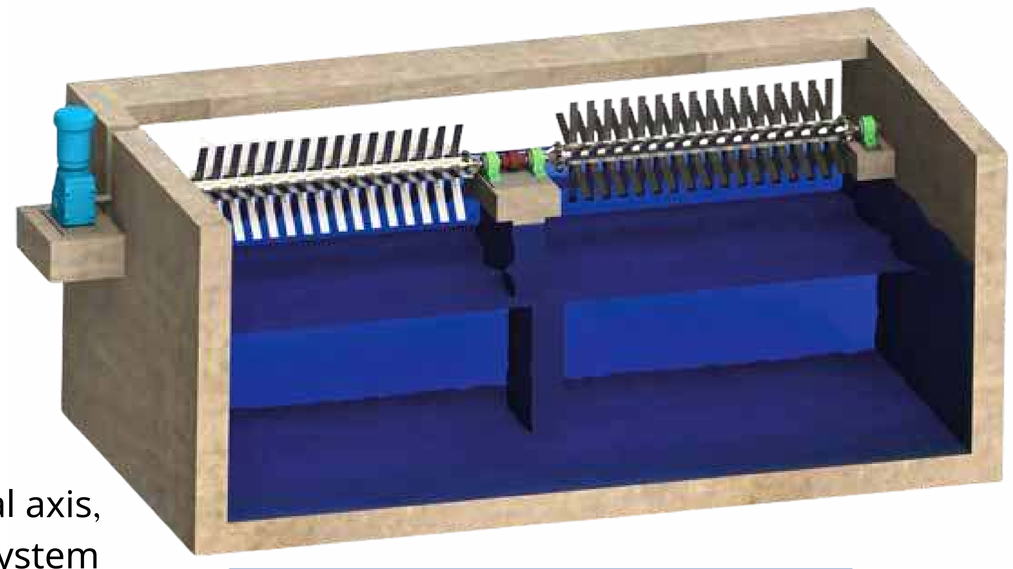
	Part Name:
1	**Motor / Gearbox**
2	**Motor / Gearbox Mounting Frame or Float System**
3	**Shaft**
4	**Fan**





Section C:
Horizontal Shaft Brush Surface Aerators:
General Description and Purpose of Use:

Horizontal shaft brush surface aerators are used in biological wastewater treatment plants both to provide the oxygen required for the survival of microorganisms in aeration tanks and to achieve mixing. Additionally, they have a cooling effect on the wastewater in the unit where they are installed.



Operating Principle of the Equipment:

Horizontal shaft brush surface aerators consist of a shaft group rotating on a horizontal axis, a brush group attached to the shaft, and a drive unit that powers the shaft. The brush system splashes wastewater into the air in the form of water droplets, thus enriching the wastewater with oxygen. The microbubbles formed during this process not only provide oxygen to the wastewater but also increase the efficiency of removing volatile organic matter.

Horizontal shaft brush surface aerators can be designed to operate with two shaft groups powered by a single drive unit, taking into account the dimensions of the tank and the required oxygen demand. Surface aerators are installed partially submerged in the wastewater between reinforced concrete walls.

Technical Specifications:

- They are designed and manufactured in optimal size and quantity by considering the tank dimensions and required oxygen demand.
- One end of the main shaft group is mounted on a bearing, and the other end is connected to the drive unit.
- Both ends of the main shaft group are protected with splash guards against wastewater splashes.
- They are preferred due to their easy installation and removal without requiring in-tank assembly, allowing for maintenance without emptying the tank and ensuring quiet operation.
- When operated under the control of an oxygen meter, over-aeration is prevented by supplying only the necessary oxygen for the microorganisms, thereby minimizing operating costs.

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Material Details:

- Shaft Group: Manufactured from DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316).
- Brush Group: Manufactured from DIN 1.4301 (AISI 304) or DIN 1.4401 (AISI 316)

"Different material options can also be selected upon customer request."

Accessories:

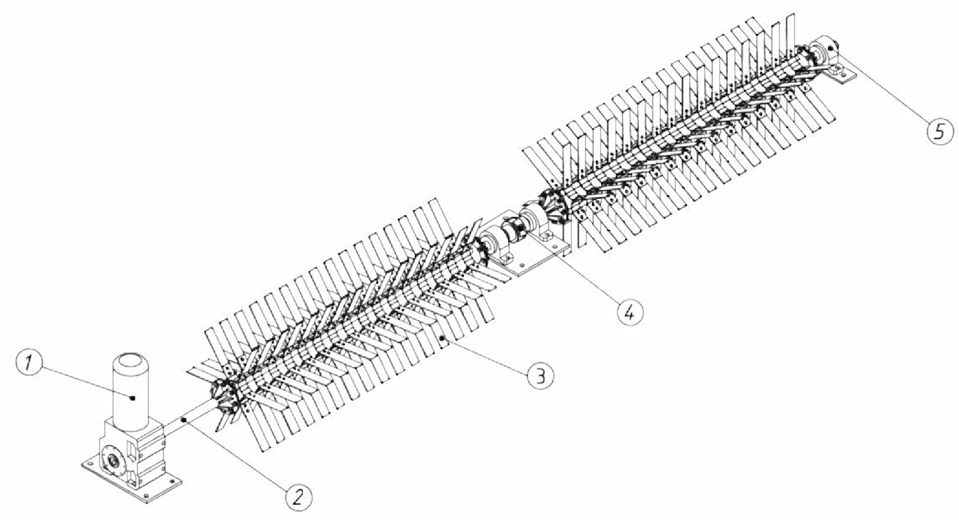
- Oxygen meter
- Frequency inverter
- Emergency stop button
- Local power and control panel

Indicates optional accessories.

Advantages:

- High Mixing Efficiency
- Compact Design
- Easy Transportation and Installation
- Low Operating and Maintenance Costs
- Made from Corrosion-Resistant, Long-Lasting Steel Construction Material
- Economical and Durable Design
- Long Service Life

	Part Name:
1	**Motor / Gearbox**
2	**Shaft Group**
3	**Brush Group**
4	**Coupling Connection**
5	**Bearing**



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Filtrepres:

The filter press is a mechanical dewatering device widely used among sludge dewatering methods. It helps minimize the volume of sludge generated during the treatment of domestic and industrial wastewater. It is also a reliable piece of equipment used in various sectors where solid–liquid separation is required

The fabrics used in filter press equipment can be made from polypropylene, cotton, staple fiber, or other raw materials, depending on the characteristics of the solid–liquid mixture to be filtered.

The sludge enters the unit with a 3% solid content and reaches a 25% solid content by the end of the unit.

The pre-conditioned liquid–solid mixtures enter the filter press and are compressed between the plates under a pressure of 12 bar. The liquid passes through the filter, and the filtrate flows from the taps located beneath the plates into the filtrate tray, from where it is redirected back to the equalization tank.

After the desired solid content is achieved, the plates are opened and the solid material is transferred to the sludge trough beneath the plates or to a waste container. The cake discharge system is designed either manually or automatically, depending on system requirements and customer preferences.

Advantages:

- The ability to obtain high–solidity filter cake at low costs
- Availability of various filter press alternatives for different purposes,
- Low operating and maintenance costs,
- Ease of use,
- Small space requirement,
- High filtration achieved with low chemical usage,
- Selection of plates and cloths with different properties depending on sludge characteristics,
- Durable structure for long service life,
- Ability to reach high solid content resulting in low sludge disposal costs.

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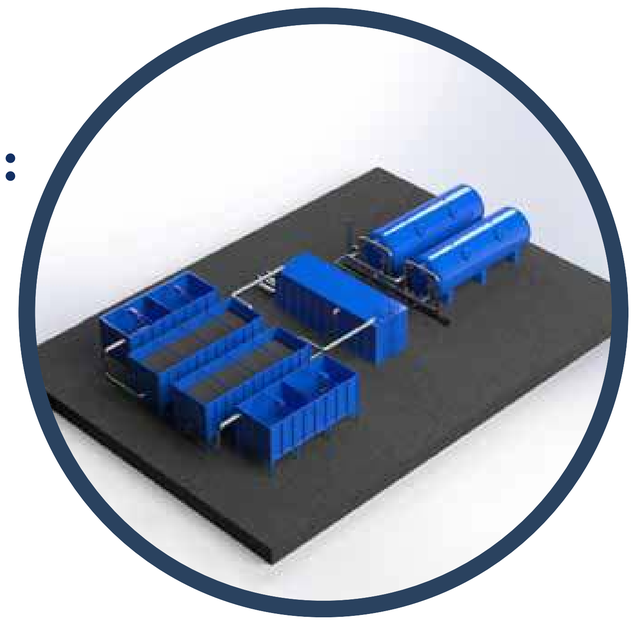
River water collection systems:



An Efficient River Water Filtration System – Custom Designed:

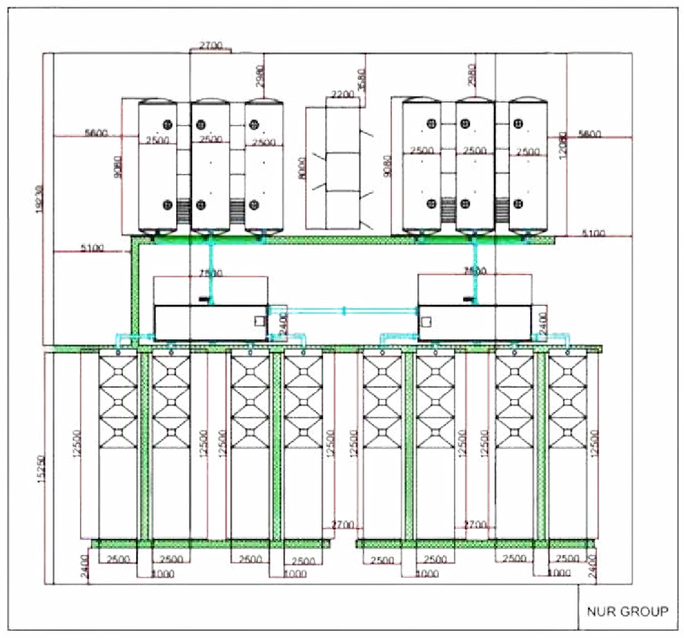
The river water treatment unit is a comprehensive and efficient solution for purifying surface water sourced from rivers, lakes, and similar bodies. These units are custom-designed to meet the specific needs of agricultural, industrial, or municipal projects.

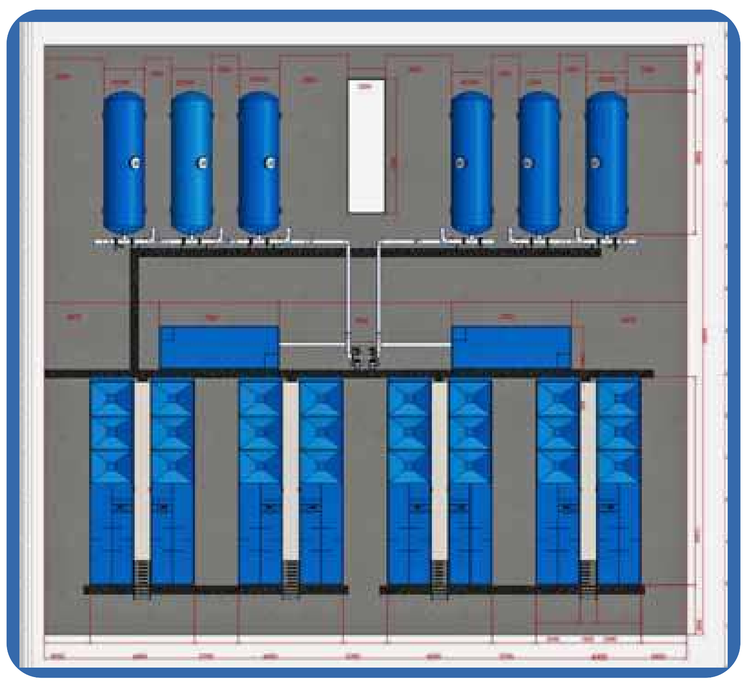
Available Capacities:

We design and manufacture units with the following capacities:

- 50 cubic meters per hour
- 100 cubic meters per hour
- 200 cubic meters per hour
- 500 cubic meters per hour
- 800 cubic meters per hour
- 1000 cubic meters per hour

For systems exceeding these capacities, they are implemented as treatment plants within specially designed concrete basins tailored to the size of the project.

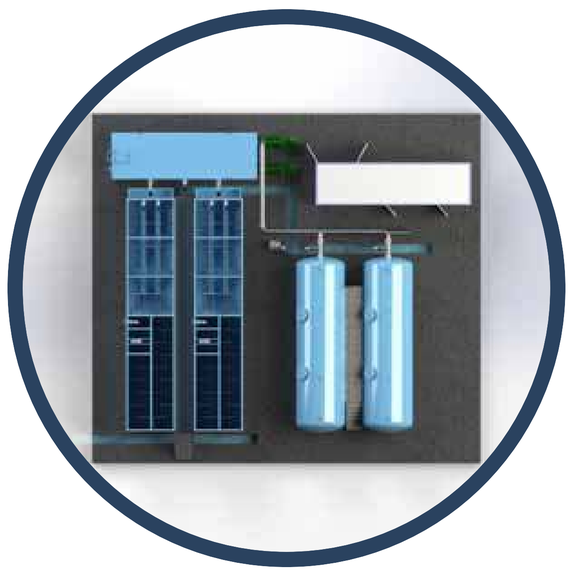




Manufacturing Specifications:

The treatment units are manufactured in our facility at "**Nur Group**" according to the highest quality standards. The manufacturing process includes the following:

- The tanks are constructed from high-strength ST-37 carbon steel.
- An initial internal sandblasting process is performed to remove all impurities.
- A primer coating is applied to protect the metal surface.
- The interior is coated with food-grade epoxy to ensure safety for human consumption applications.
- The exterior is coated with industrial-grade epoxy, resistant to corrosion and heat, ensuring durability in harsh environments.



Local Manufacturing:

All treatment units are fully manufactured in-house at our **Nur Group** facility, allowing us to guarantee quality, ensure rapid delivery, and provide comprehensive after-sales service.

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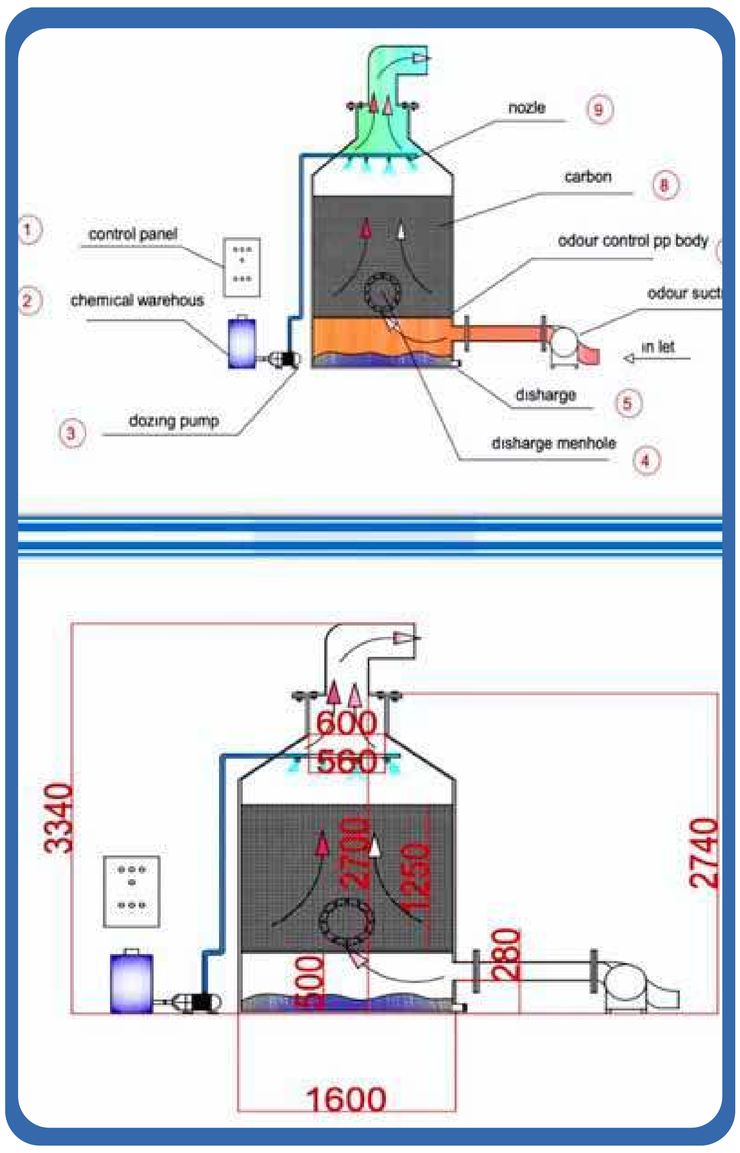
Odor Control Solutions:

Odor Removal:

NUR GROUP can deal to supply different type of odor removal like. BIOFILTERS, ACTIVATED CARBON FILTER, BIO SCRUBBER. that manufacture in turkey or Europe
he three most common technologies for odor control are Chemical Scrubbers, Bio trickling Filters, and Carbon Adsorbers. Selection of the proper technology depends on various factors:

- BIOFILTERS
- ACTIVATED CARBON FILTER
- BIO SCRUBBER

Capacity Air Flow from 1000 m3/hr tell 20,000 m3/hr.



Advantages:

- Multiple materials of construction to fit each need and budget – Fiberglass Reinforced Plastic (FRP), Stainless Steel, Aluminum, High–Density Polyethylene (HDPE)
- Preconditioning of the air to optimize system performance – standard mist and grease elimination and optional humidity reduction
- Monitoring of media consumption – two options: standard visual Media Bed Indicator, or the optional Electronic Bed Monitor (EBMv2) that can be added as a system upgrade.
- Most importantly, the highest quality chemisorbant media to remove target odors

Media Bed Indicator:

Deep bed units are equipped with a Media Bed Indicator. It is positioned inside the system at an angle against the direction of media airflow to detect the media expiration level.

NUR GROUP'S CHEMISORBANT MEDIA:

NUR GROUP's adsorbent media is used for gas filtration to target gases, vapors, and odors. **NUR GROUP** offers a variety of media to all customers to provide the most effective solution at the best cost. The main gases **NUR GROUP's** adsorbent media target are: Ammonia, Hydrogen Sulfide, Sulfur Dioxide, Nitric Oxide, Formaldehyde, and Chlorine

DRUM SCRUBBER (DS):

The **NUR GROUP** Drum Scrubber is a completely self–contained vent control system for small–flow odor air streams ranging in volume without prefiltering or mist/grease elimination. Provides airflow up to 2,123.7 CMH (1,250 CFM).
Typical applications are small and low cost.
Standard: High–density polyethylene (HDPE).

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Vertical Bed Scrubber (VBS):

The **NUR GROUP** Vertical Bed Scrubber (VBS) provides continuous high-efficiency air purification for contaminated air streams up to 28,883.1 CMH (17,000 CFM).

- A self-contained, vertical airflow unit, which eliminates the potential for air bypass with the system's vertical airflow.
- Construction Material: Municipal Standard: Fiberglass reinforced plastic. Industrial Standard: Stainless Steel. Other options: Aluminum

Packed Bed System (PBS):

The **NUR GROUP** PBS System is a completely self-contained, horizontal airflow package for up to 9,514.4 CMH (5,600 CFM).

- Low profile, multiple beds, lowest noise.
- Construction Material Municipal Standard: Fiberglass reinforced plastic (FRP).
- Horizontal configuration.

V-Bank Transition System (VTS):

The **NUR GROUP** VTS system is a high-volume, low-maintenance solution for industrial and wastewater odor control. Provides airflows up to 71,358.4 CMH (42,000 CFM).

- High airflow and multiple beds.
- Construction Material Standard: Fiberglass reinforced plastic (FRP).
- Complete solution with customizable beds.

Radial Flow (RF):

The **NUR GROUP** Radial Flow System is a round tank design meant for high airflows (above 5,097.0 CMH / 3,000 CFM) where footprint is more of a concern than height.

- Provides a high airflow solution in a small footprint.
- Construction Material Standard: Fiberglass reinforced plastic (FRP).
- Round tank design that swirls the air through a column of adsorbent media.
- Provides airflows up to 45,475.2 CMH (25,000 CFM).

BEAST™ Bioscrubber (BEAST™):

The **NUR GROUP** BEAST™ (Biologically Engineered Adsorbent Scrubber Technology) Bioscrubber System consists of a bioscrubber tower, followed by a polishing unit, to ensure the most efficient removal of even the highest H_2S levels. One system can clean up to 13,592.08 CMH (8,000 CFM) of airflow, and unlike other systems on the market, the BEAST™ is low maintenance.

- Provides the highest odor removing power (300+ ppm of H_2S)
- Full remote monitoring and notification system
- Advanced biomedium has 10+ years of life.

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Basket Screen:

Basket screens are very simple and low-cost equipment typically used in small-scale treatment plants.

They function as coarse screens in preliminary treatment to protect downstream equipment from potential damage and to enhance the efficiency of the treatment process.

These screens are attached to guide rails mounted on the pool wall. One side of the basket screen serves as a "water inlet opening."

They can be lifted and lowered for cleaning via a rope system, making them ideal for use in deep structures.

NUR GROUP offers two models of basket screens:

Manual lifting mechanism

Electrically operated lifting mechanism

These screens can be made from perforated plates or bar grating.

NUR GROUP Basket Screens primarily consist of:

The basket body, screening filter, guide rails, rope, and lifting assembly.

Product Specifications	
Material	AISI 304 – 316
Screening Gap	10 mm – 100 mm
Screen Width	300 mm – 2500 mm
Screen Height	300 mm – 2500 mm

For custom dimensions, please contact NUR GROUP.

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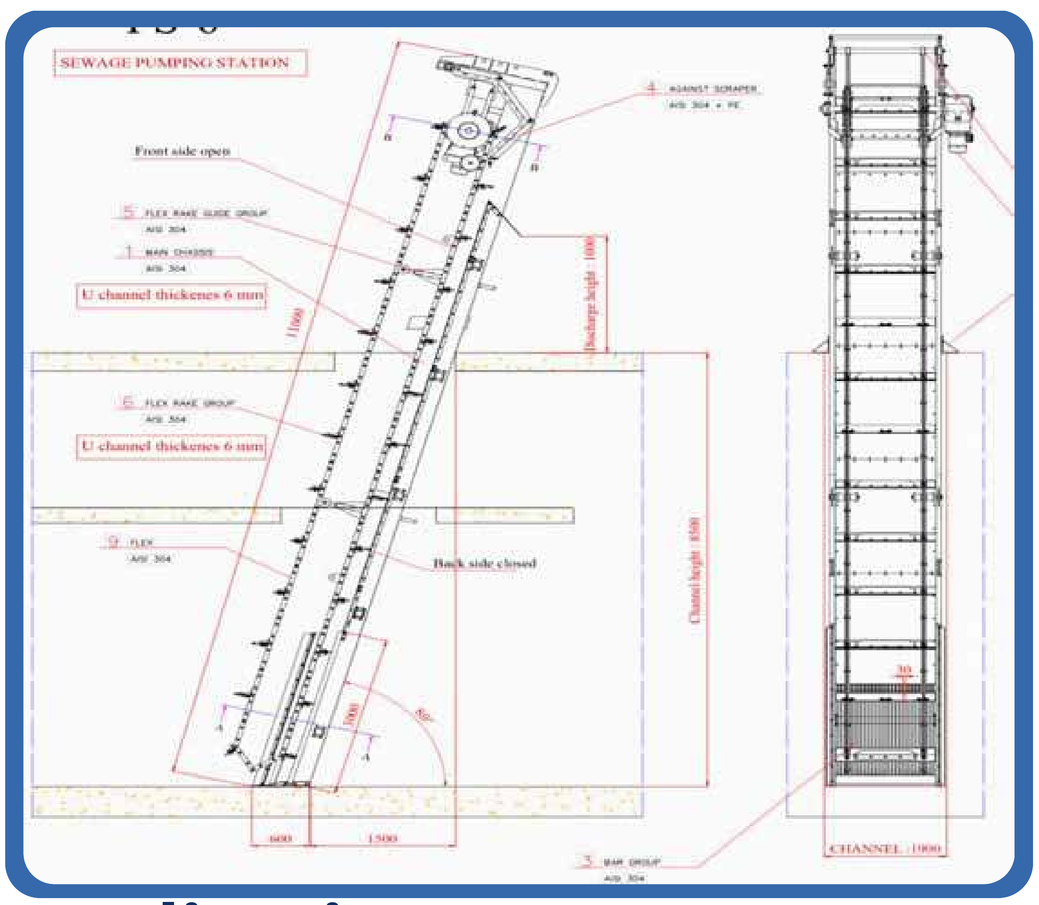
Flex Rake Screen:

HIGH CAPTURE RATE, LOW HEADLOSS:

The **NUR GROUP** Raptor® FalconRake™ Bar Screen is an efficient, proven, cost–effective screen technology for inorganic solids removal providing protection to downstream equipment in municipal and industrial applications. High removal efficiency and low headloss is achieved with multiple rakes continuously removing captured material. The **NUR GROUP** FalconRake Bar Screen features a durable stainless steel chain link design for solids removal without the need of lower bearings, sprockets, bushings, or guides, thus eliminating any fouling or jam conditions in the channel.
The FalconRake from NUR GROUP offers a wide range of bar shapes and depths to ensure successful operation regardless of the application, creating an efficient, durable, and dependable rapid debris removal system.

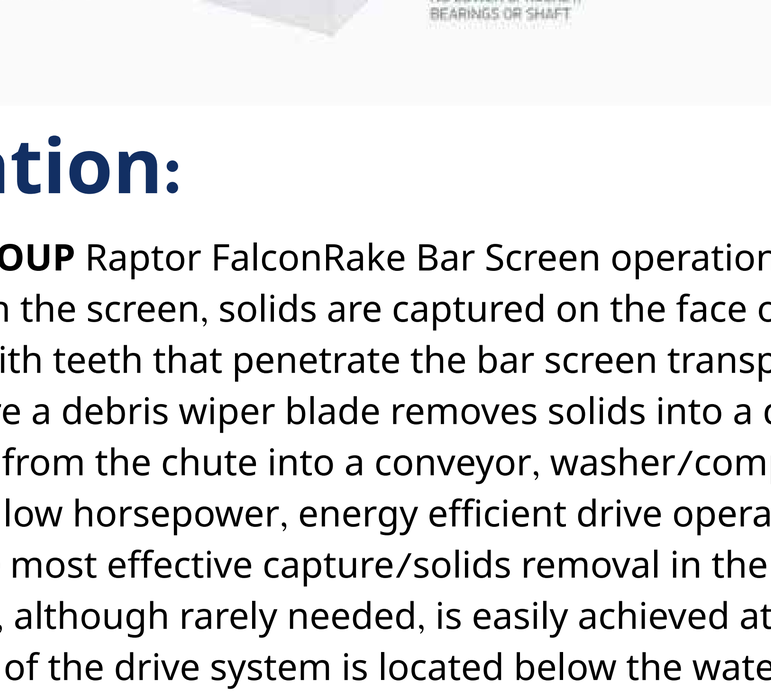
Superior design and construction:

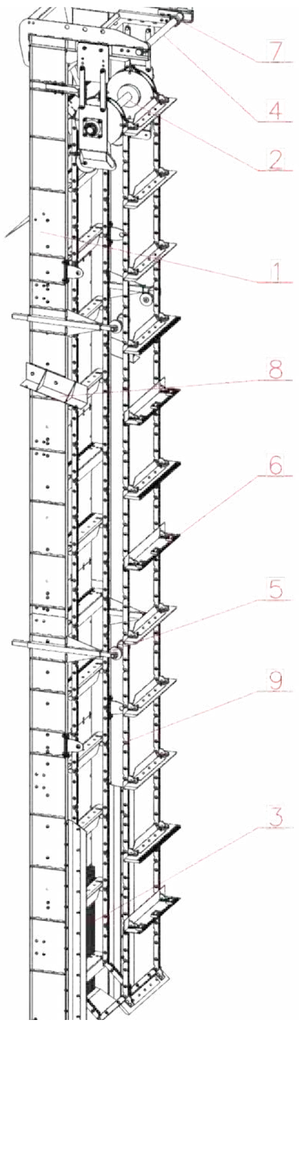
- All stainless steel construction to resist corrosion
- Low horsepower, energy efficient drive system
- Minimal headroom required above operating floor
- Bar spacing available from 1/4–inch
- Variable speed to ensure superior cleaning
- Durable cast stainless steel chain link system
- Optional cover for odor control
- Optional explosion–proof design or weather protection system
- Optional teardrop shaped bars for reduced headloss

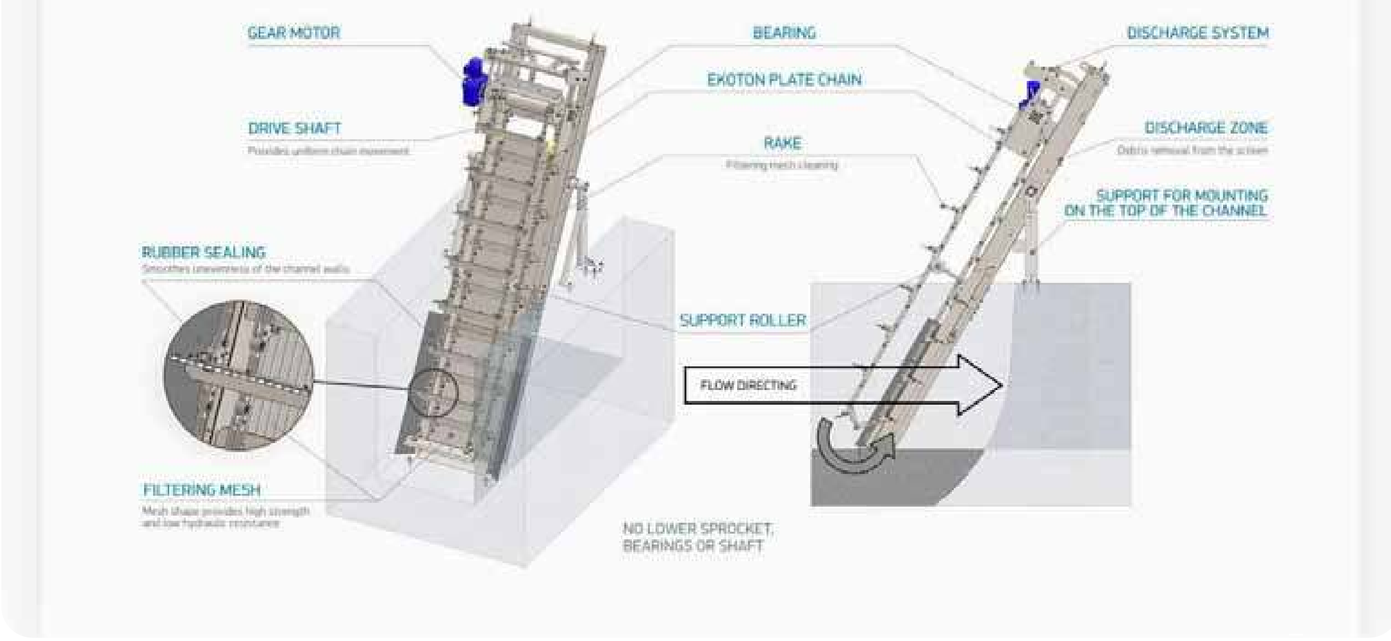


The Complete Package:

The Raptor FalconRake Bar Screen can be used in tandem with the Raptor® Wash Press to wash, compact and dewater captured screenings. The screen and wash press equipment controls can be integrated into one control panel for smooth and efficient operation







Operation:

The **NUR GROUP** Raptor FalconRake Bar Screen operation is simple. As wastewater flows through the screen, solids are captured on the face of the bar screen. Multiple rake heads with teeth that penetrate the bar screen transport solids to the top of the unit where a debris wiper blade removes solids into a discharge chute. Materials fall from the chute into a conveyor, washer/compactor or dumpster for disposal. The low horsepower, energy efficient drive operates at low or high speed to ensure the most effective capture/solids removal in the wastewater stream. Maintenance, although rarely needed, is easily achieved at the operating floor level since no part of the drive system is located below the water surface.

Applications:

Efficient, economical performance you can rely on for:

- Municipal and industrial wastewater treatment plants
- Pump stations
- Surface water intake structures
- Combined sewer overflows

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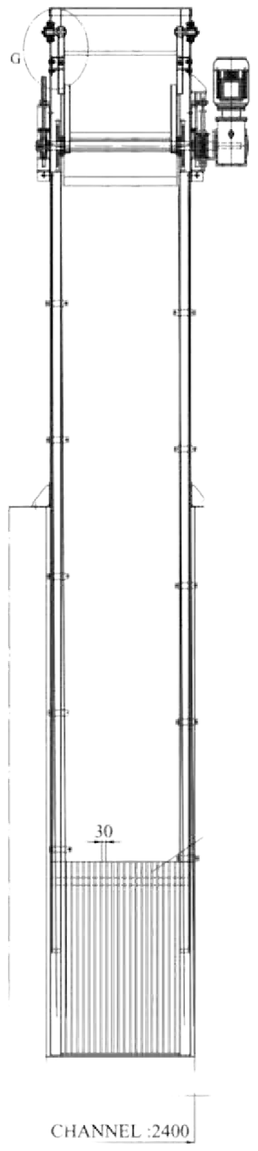
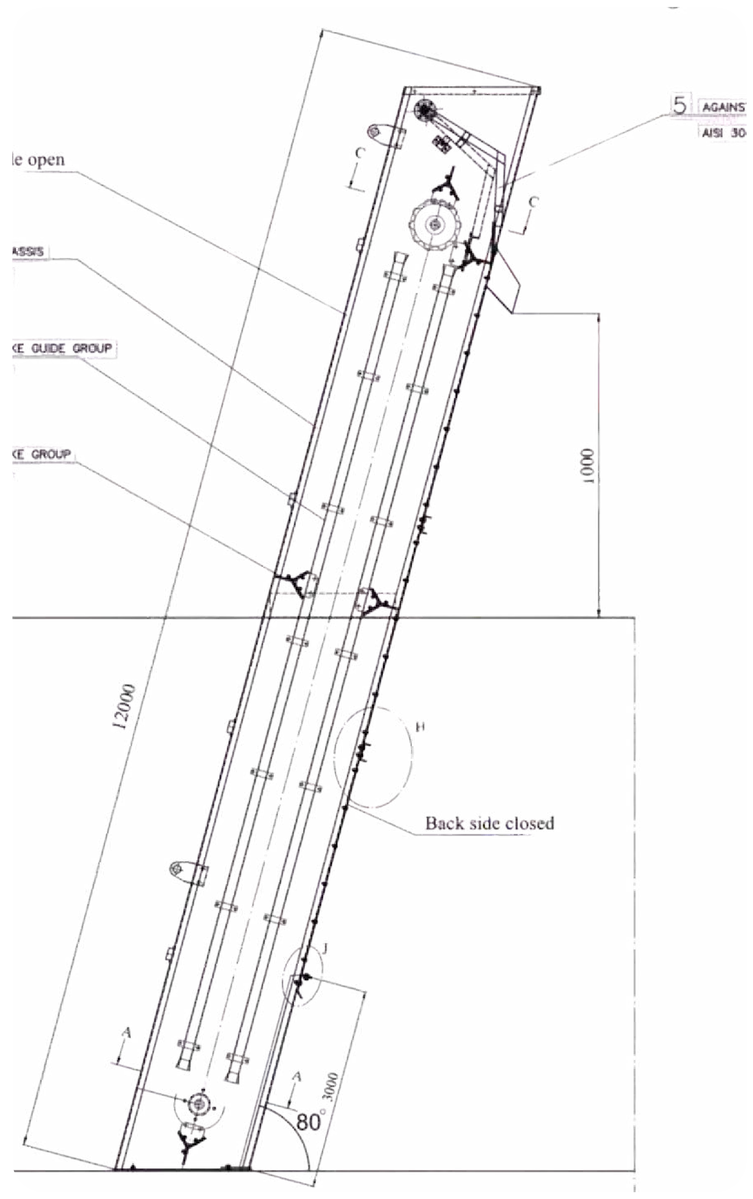
Mechanical Screen:

Product Specifications	
Channel Width	500 3000 mm
Channel Depth	1000 5000 mm
Bar Spacing (or Screen Spacing)	10 – 80 mm
Power	0.75 –1.5 Kw
Chute Height	1000 1500 mm





Applications of Linear Mechanical Screens:

- Pump Stations
- Industrial Treatment
- Drinking Water Treatment Plants
- Domestic Wastewater Treatment

Chemical Treatment Plants:

Operating Principle of Linear Mechanical Screens:

Based on the level difference between the inlet and outlet, or according to the programmed time intervals, the screen rake enters the channel and removes the debris accumulated on the screen.

It collects them. The rake then returns to the system.
Could cause damage Over the waste
It passes over the waste and continues to operate without damage. The waste transported along the frame is separated from the system by means of a scraper.

Advantages:

- Can be used in wastewater treatment plants as coarse and fine screens.
- Channel widths from 0.5 m to 3 m can be accommodated.
- Electric motor and gears do not wear out due to unidirectional movement.
- Can be operated based on channel water level or on a timed schedule.
- There is no height limit for discharging waste taken from the channel.
- Operates quietly.
- Protected against overloads with hydraulic, mechanical, and torque limiters.

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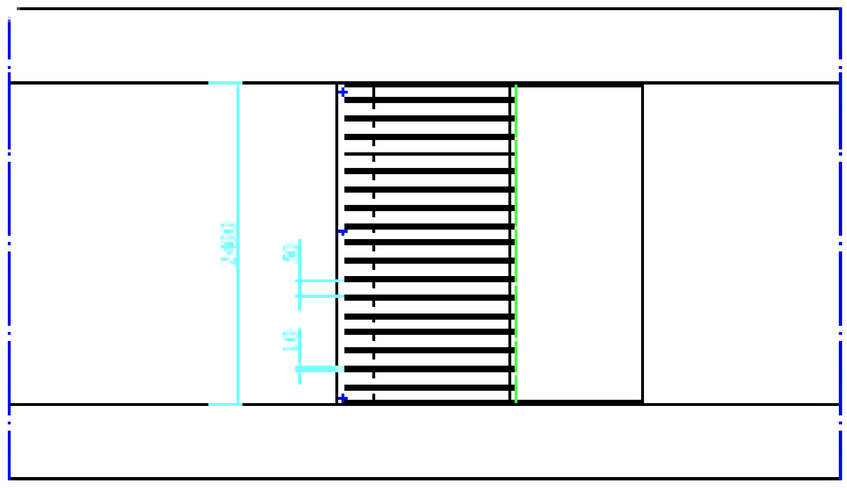
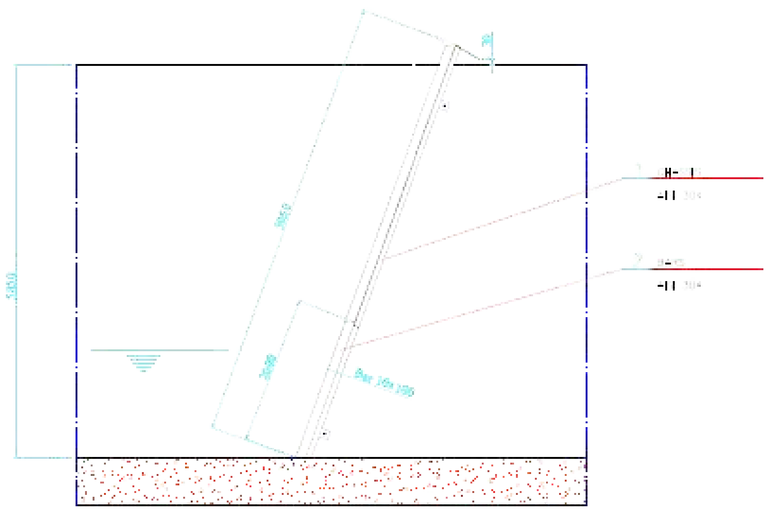
MANUEL Flex Rake Screen:

Manual Coarse Screens are used in wastewater treatment plants with limited space. Their purpose is to retain waste materials such as stones and wood to prevent damage to fine screens. Since they are manual, the cleaning process is carried out using a hand rake. There are perforated baskets into which the collected waste is placed. These baskets can be removed and reinstalled when needed.



Manual Coarse Screens can be made from stainless steel or carbon steel and can also be manufactured with hot-dip galvanizing. The spacing between the bars can vary between 10 and 50 millimeters.

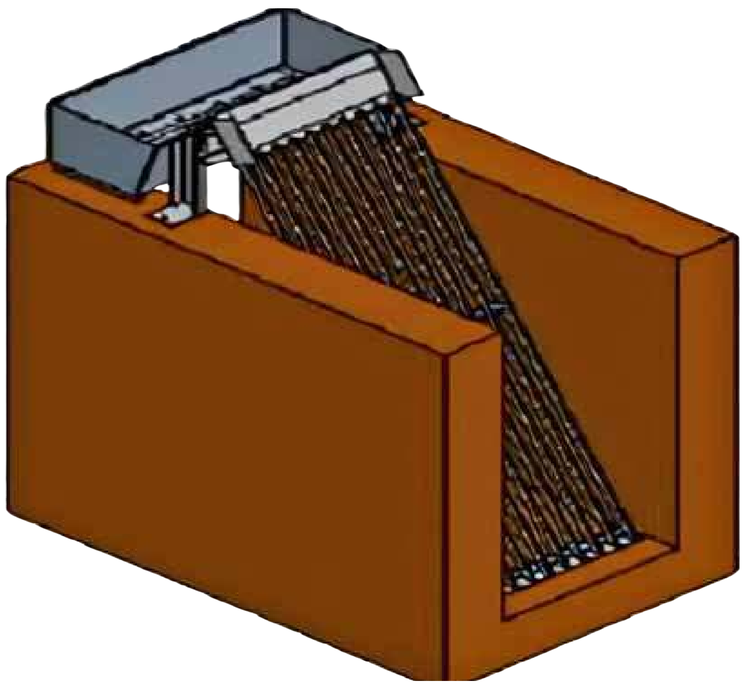
This system, which contains no mechanical parts, can be used in all types of wastewater treatment plants. As one of the most basic mechanisms of preliminary treatment equipment, Manual Coarse Screens are used to remove large waste materials before they enter the treatment facility.

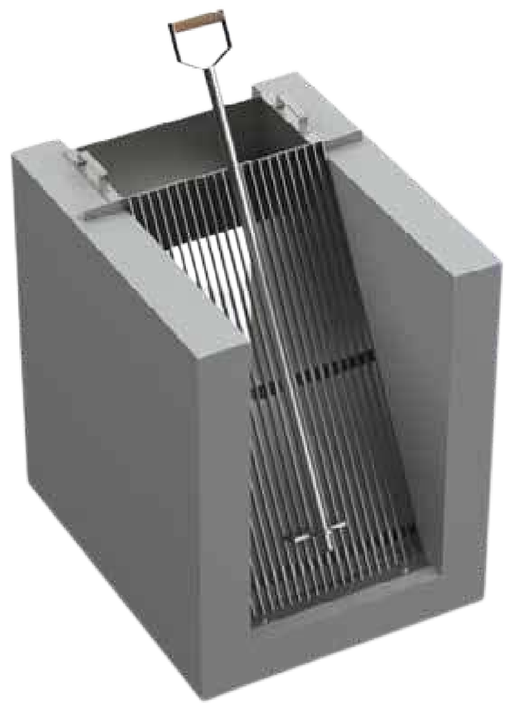


Manual Coarse Screens can be installed in channels at angles between 55 and 90 degrees, depending on the needs and preferences of the facility.

Features of Manual Coarse Screens:

- Have a maximum level of waste discharge capacity
- Cleaning is performed manually
- Offer quick and easy installation
- Have low maintenance, operation, and investment costs





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Dissolved Air Flotation (DAF):

Dissolved Air Flotation (DAF) technology is used to achieve effective and reliable removal of solids and oils.

Reducing Discharge Cost with Dissolved Air Flotation (DAF):

Industrial facilities aim to reduce effluent discharge costs and remove pollutants such as suspended solids, fats, oils, and chemical oxygen demand (COD), while complying with environmental regulations.

Dissolved Air Flotation (DAF) technology is a common and effective method to achieve this, and **Nur Group** provides reliable and robust DAF systems as a key step in wastewater treatment.

Nur Group's High Rate (HR–DAF) system efficiently removes solids within a compact footprint, offering a scalable solution compatible with the treatment of fresh, salt, and brackish water.

Advantages:

Reduced CAPEX, maximize removal performance

i–DAF can be part of a total wastewater solution to maximize treatment performance and system procurement.

Reduced OPEX, remove pollutants

Patented clog–free aeration tube with ower maintenance costs compared to aerated pumps and smart water level control to adapt the sludge collection.

Reduced system footprint

With the specially designed corrugated plate pack technology, the unit footprint can be reduced by up to 85% in comparison to units without plate packs.

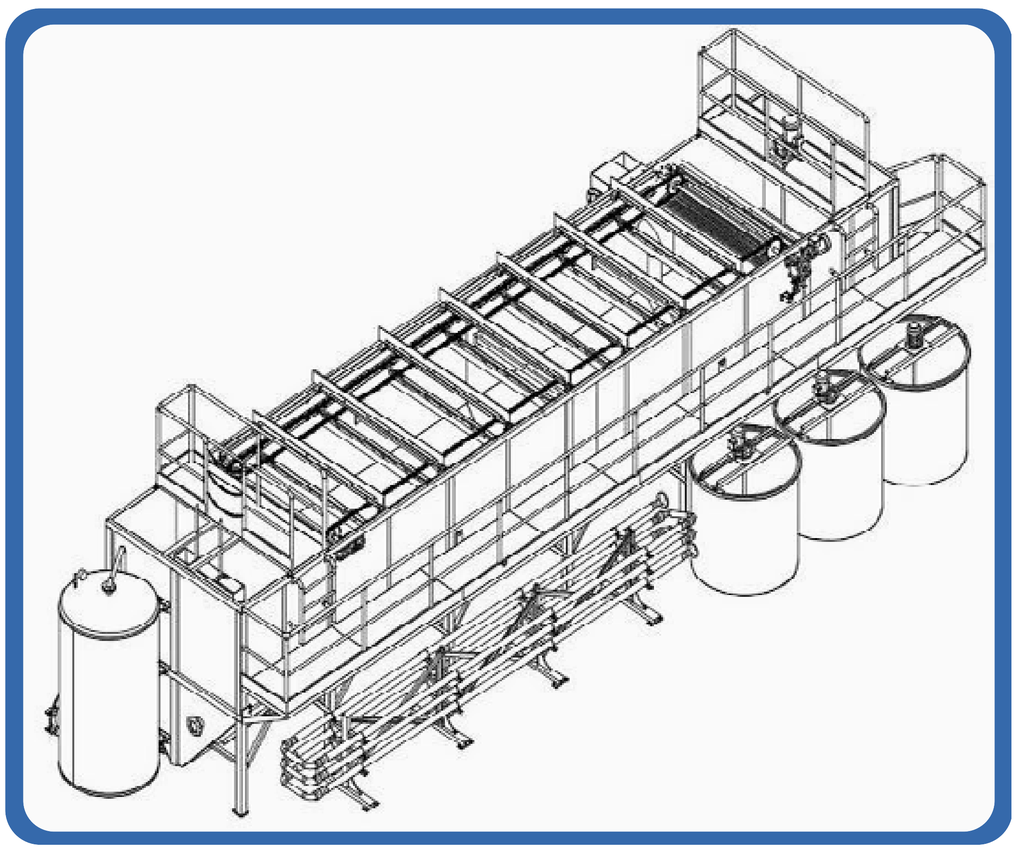
High effluent quality by 3–WHEEL SKIMMER

The 3–wheel skimmer of Nijhuis HR–DAF has a fully adapted beach, together handling the vulnerable flotation structure gently with minimal backflow, and therefore achieving the optimal sludge removal. The skimmer is available in plastic for seawater application.

Operational flexibility with the Smart Effluent Valve (SMART EFFLUENT VALVE)

The smart effluent valve allows the water level in the HR–DAF system from **Nur Group** to remain constant even under fluctuating flow conditions. It also enables complete removal of the floating layer before shutdown, minimizing residual sedimentation to the lowest possible level.

Type	Internal width of unit (m)	Hydraulic capacity, per unit (m3/h)	Flotation cell area (m2)	Effective platepack area (m2)
HRF 03	3	Upto 970	24	367
HRF 04	4	Upto 1290	32	490
HRF 06	6	Upto 1940	47	734
HRF 08	8	Upto 2470	63	979
HRF 10	10	Upto 3230	79	1224



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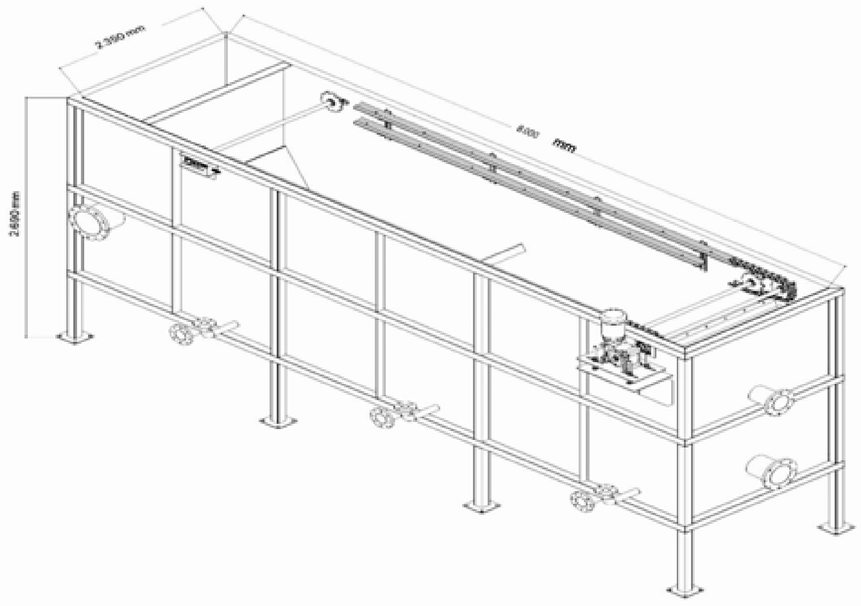
DAF Product line:

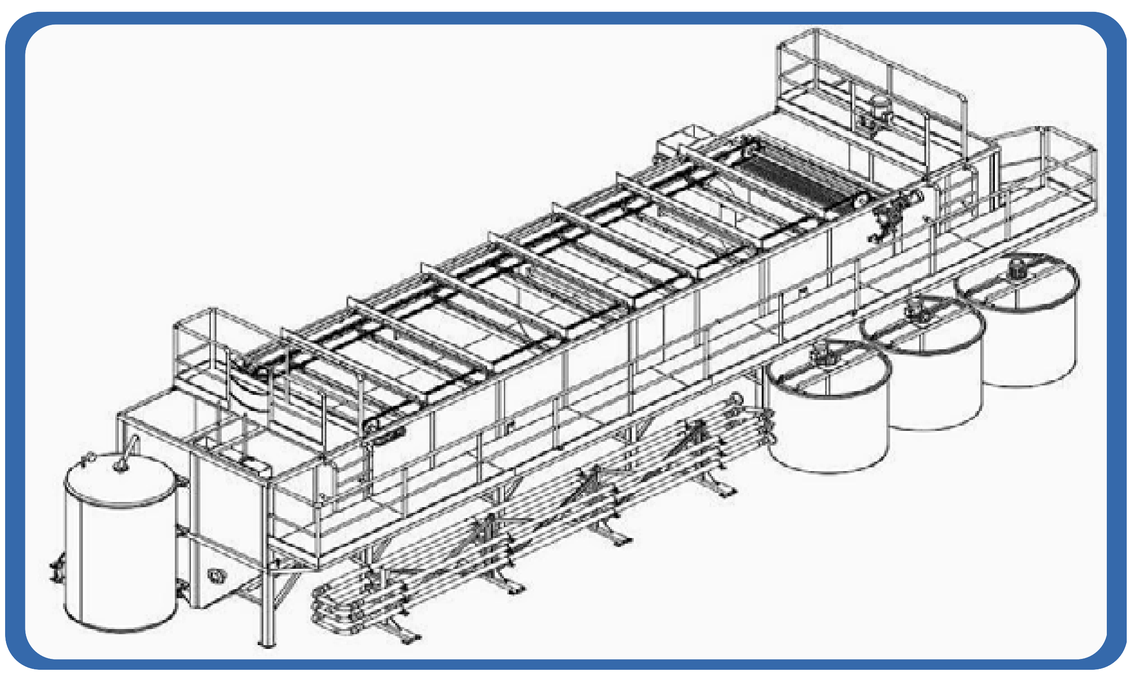
IPF – Compact dissolved air flotation units for low capacities



NPF – Compact dissolved air flotation units for high capacities

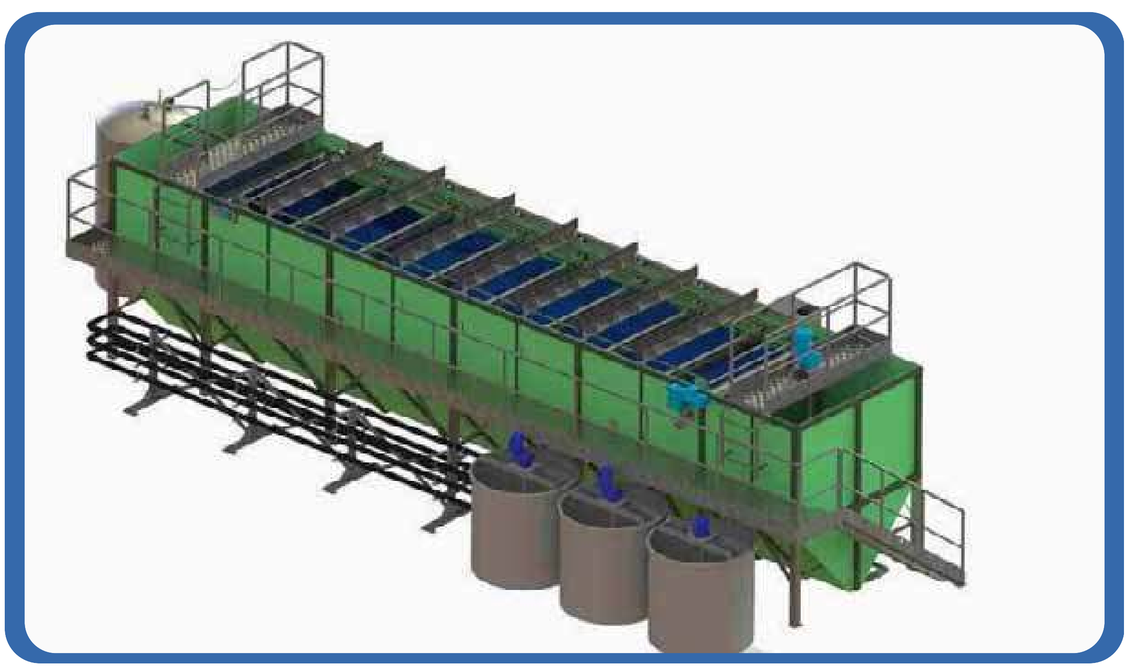
GDF – Open dissolved air flotation units for handling high sludge loadings

DGF/DNF – Dissolved Gas flotation unit using nitrogen–gas or biogas in the aeration system



ICFF – Containerized DAF system based on a plug and play principle

AECO–FAT – DAF is the first step to recover fat from sludge to be used as biofuel



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SBR:

The sequential steps in the basin usually involve 5 main stages in the Nur Group company:

Filling: Wastewater is introduced into the basin, which can be done either quietly (without mixing) or during aeration (aerated fill).

Aeration: Air is pumped into the basin to provide oxygen for the aerobic bacteria that break down organic matter.

Settling: Aeration is stopped, and the water is left undisturbed to allow the solid materials (sludge) to settle at the bottom.

Decanting: The treated water is drawn from the top of the basin without disturbing the sludge at the bottom.

Idle/Waste Sludge Removal: A portion of the excess sludge is removed in preparation for the next batch.

Specifications and Components of the SBR System:	
Item	**Description**
Treatment Basin	Usually made of concrete, or carbon steel ST37, or stainless steel 304.
Aeration Systems	Includes air diffusers to provide oxygen for the bacteria.
Control Systems	Or a smart controller with PLC to precisely control the timing of the different stages.
Decanter Unit	Designed to draw water from the top without disturbing the bottom layer.
Sensors	To monitor pH, MLSS, DO levels, and others as needed.

Advantages:

- Flexible Operation: The system can be easily programmed to accommodate varying wastewater loads.
- High Efficiency in Removing COD, BOD, and Nitrogen.
- No Need for a Separate Secondary Sedimentation Tank (everything takes place in the same tank).
- Reduced Space Requirements for Construction.
- Easy Expansion and Maintenance.
- Capability for Fully Automatic Operation.

When is the SBR System Used:

- Wastewater treatment plants in small and medium-sized areas
- Housing projects, hospitals, and industrial facilities
- Areas with irregular or fluctuating flow rates

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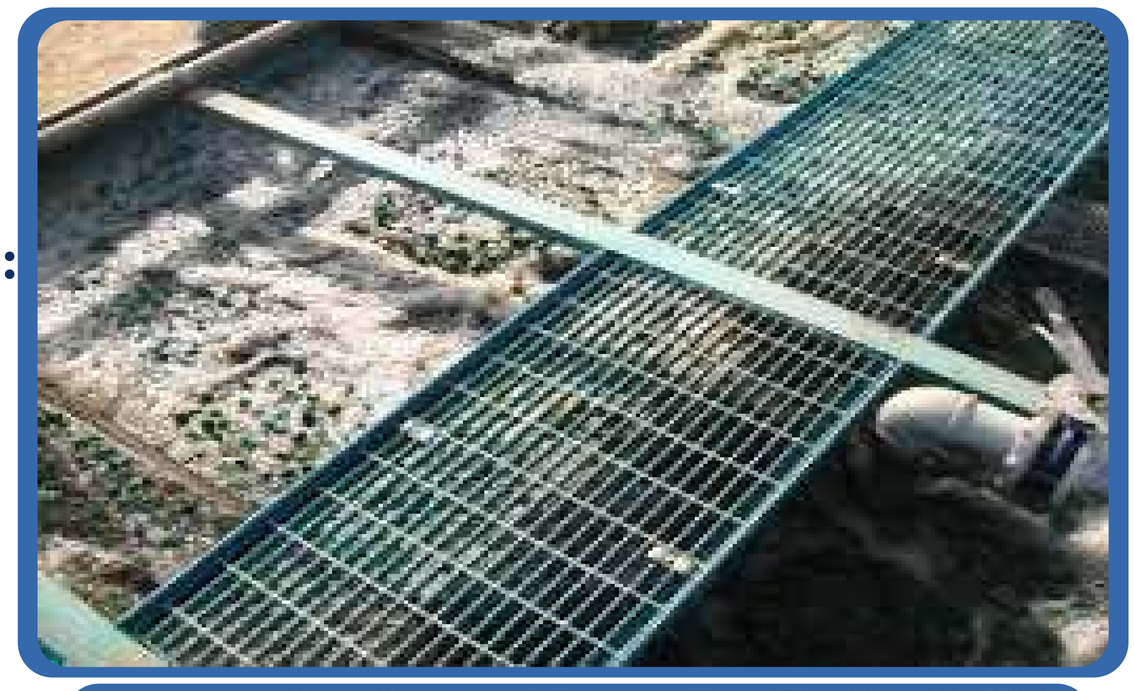
MBBR:



Principle of Operation of MBBR In Nur Group:

1. Air is pumped into the aeration tank through air diffusers, which
   - Provide oxygen to the bacteria
   - Move the biomedia carriers inside the tank
2. A biofilm layer forms on the surface of these carriers, where microorganisms break down organic materials.
3. After treatment, the water passes to a sedimentation tank to separate solids or to a subsequent treatment stage.

Advantages:

1. High treatment efficiency even under high organic load conditions.
2. Does not require sludge recycling as in conventional activated sludge systems.
3. Compact design compared to traditional systems.
4. Ease of scalability by adding additional media.
5. Stable performance despite variations in influent water quality.
6. Suitable for primary or secondary treatment, as well as nitrogen removal.

When is MBBR used?

1. Wastewater treatment plants for residential complexes, hospitals, and hotels.
2. Treatment of industrial wastewater (such as food and beverage, and textile industries).
3. Enhancement of the performance of existing treatment plants.
4. Projects requiring a compact design and rapid implementation.

Specifications and Components of the SBR System:	
Item	**Description**
Aeration Tank	Usually made of concrete or carbon steel ST37.
Plastic Carriers (Media)	Provides a large surface area for bacterial growth, usually made of HDPE.
Aeration Systems	Includes blowers and air diffusers to circulate the medium and supply oxygen.
Internal Retention Screen	Prevents the carriers from leaving with the treated water
Secondary Settling Tank (if applicable)	Used to separate sludge from the clear water.

Typical Technical Specifications:	
Item	**Value**
Basin Media Fill Ratio	40% – 70% of the total volume
BOD Removal Percentage	Up to 90% – 95%
Effective Surface Area of the Media	500 – 1200 m^2/m^3
Required Airflow	4 – 6 cubic meters per hour / m^3
Hydraulic Retention Time (HRT)	4 – 8 hours (depending on the design)

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MBR:

What is the MBR system?

The MBR (Membrane Bioreactor) system is a system that combines:
1. Biological treatment (typically aerobic) to remove organic matter and pollutants.
2. Physical separation using membranes to separate fine solids and microorganisms from the water.

Thanks to the use of membranes, this system produces highly purified water, which is often suitable for reuse without the need for additional filtration or disinfection.

Types of membranes used in MBR by NUR GROUP Company:

1. UF (Ultrafiltration) – removes particles down to 0.01 microns.
2. MF (Microfiltration) – removes particles down to 0.1 microns.
3. Membranes are made from materials such as PVDF, PES, or PTFE.

When is the MBR system used?

1. Water treatment plants for upscale residential areas.
2. Hotels and resorts.
3. Industrial treatment requiring water reuse.
4. Expansion of existing treatment plants without the need for additional space.
5. Projects that must meet strict environmental standards.

Advantages:

1. Production of high-quality water suitable for irrigation, industrial use, or even as a pretreatment for desalination.
2. No need for a secondary sedimentation tank or final filtration.
3. High removal efficiency of COD, BOD, turbidity, and microorganisms.
4. Compact footprint – ideal for sites with limited space.
5. Fully automated operation.

Specifications and Components of the SBR System:

Item	Description
Bioreactor (Aeration Tank)	It contains the activated sludge that breaks down organic matter.
Filtration Membranes	They work to separate the clean water from the sludge and may be of the UF (Ultrafiltration) or MF (Microfiltration) type.
Aeration Systems	Includes blowers and air diffusers to circulate the medium and supply oxygen.
Suction Pumps	They provide oxygen to the bacteria and prevent membrane clogging
Secondary Settling Tank (if applicable)	They draw clean water through the membranes.
CIP (Cleaning-In-Place) Systems	To clean the membranes periodically using chemical agents.
PLC (Programmable Logic Controller) Unit	They manage all operations automatically.

Typical Technical Specifications:

Item	Value
BOD Removal	>95%
Turbidity Removal	>99%
Sludge Concentration (MLSS)	8000 – 12000 mg/L
Pore Size in Membranes	0.01 – 0.1 microns
Quality of the Treated Water	TSS < 1 mg/L , BOD < 5 mg/L
Transmembrane Pressure (TMP)	0.1 – 0.4 Bar USUALLY

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RO:

What is an RO system?

The RO system (Reverse Osmosis) is a technology that relies on passing water through semi-permeable membranes under high pressure, with the aim of removing dissolved salts, heavy metals, bacteria, viruses, and chemical pollutants.

How does the RO system work?

1. Raw water is pumped into the system using a high-pressure pump.
2. It passes through RO membranes, which allow only water molecules to pass while blocking salts and contaminants.
3. The water is divided into:

Permeate (pure water): exits from one side and is used.
Reject water: contains the rejected salts and contaminants and is discharged.

Typical RO Treatment Steps:

1. Pre-treatment
   - Mechanical filtration (5 microns)
   - Chlorine removal (using activated carbon)
   - Addition of antiscalant
   - Sometimes: softening or sand filtration
2. RO Process
   - High pressure application
   - Separation of salts through membranes
3. Post-treatment
   1. pH adjustment
   2. Addition of minerals (remineralization)
   3. Sometimes UV or ozone disinfection

Uses of RO:

1. Seawater desalination (SWRO)
2. Desalination of saline or brackish groundwater (BWRO)
3. Home drinking water purification systems

Industries:

- Food and beverage industry
- Pharmaceutical industry
- Power plants
- Chemical factories

Advantages:

1. High removal of dissolved salts (TDD) reaching more than 99%.
2. Effective removal of bacteria, viruses, heavy metals, nitrates, and fluoride.
3. Production of ultra-pure water (suitable for sensitive industries such as electronics and hospitals).
4. Easy automatic operation.

Components of the RO System:	
Item	**Description**
Pre-filters (pretreatment filters)	To remove sediments, chlorine, and oils before entering the membranes.
High-Pressure Pump	To pump water to the membranes at a pressure of 16 – 70 bar (depending on the type of water).
RO Membranes	The main component in the process, made of polyamide material.
Pressure Vessel	It contains the RO membranes and maintains the operating pressure.
Pressure and Conductivity Meters (TDS Meters)	To monitor water quality and pressure.
Control Unit (PLC or Manual)	To manage operation, cleaning, and shutdown.

Typical Technical Specifications:	
Item	**Value**
Salt Removal Percentage	95 – 99 %
Operating Pressure	10 – 70 bar (depending on the water type)
Influent Water Quality (TDS)	Municipal Water: < 1500 ppm Seawater: ~35,000 ppm
Recovery Rate	45 – 75%
TDS after RO (Reverse Osmosis)	< 100 PPM (Usually lower.)
Type of Membranes	spiral wound polyamide

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