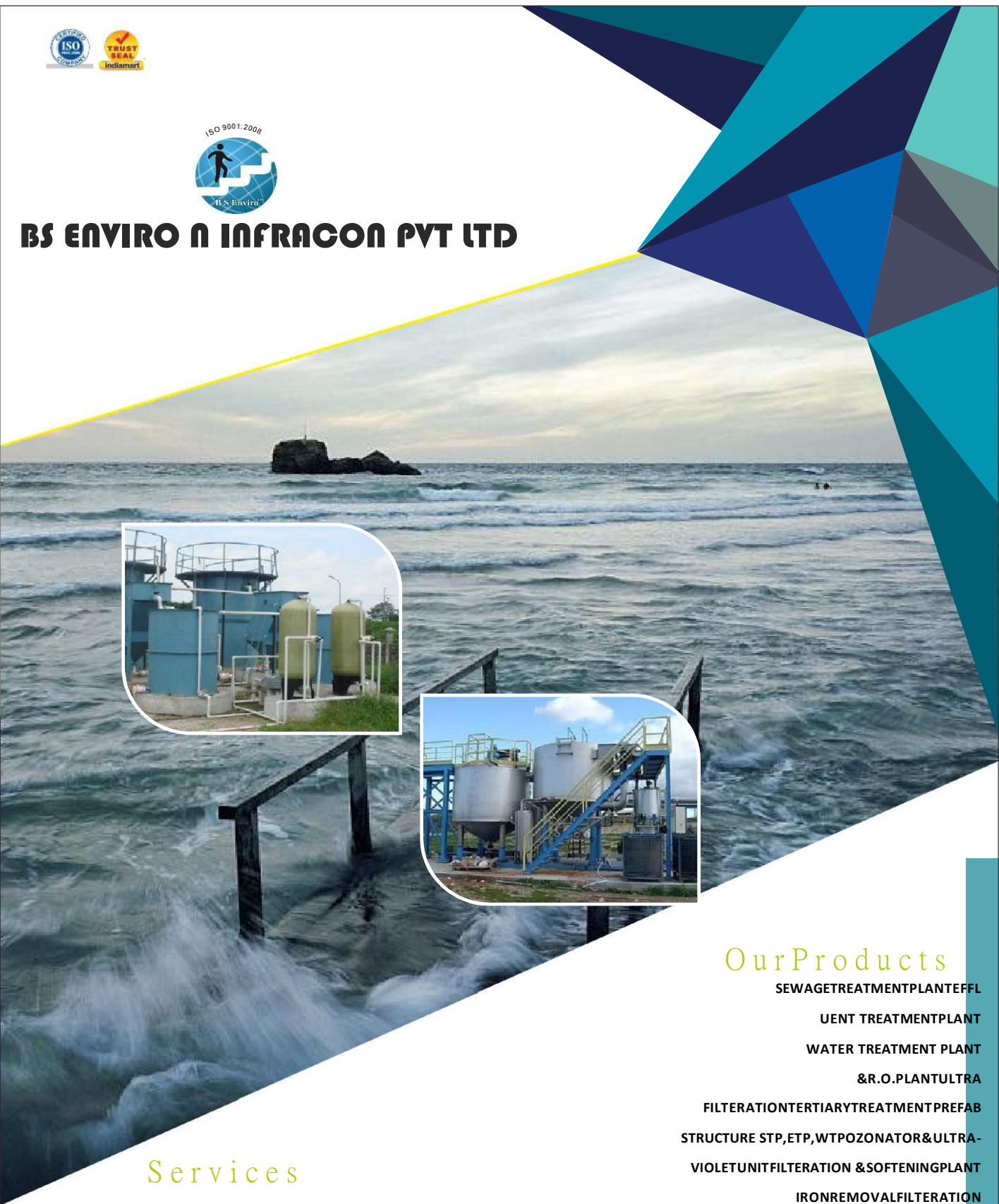




# BS ENVIRO & INFRACON PVT LTD



## Our Products

- SEWAGE TREATMENT PLANT EFFLUENT TREATMENT PLANT
- WATER TREATMENT PLANT & R.O. PLANT ULTRAFILTRATION TERTIARY TREATMENT PREFAB STRUCTURE STP, ETP, WTP OZONATOR & ULTRAVIOLET UNIT FILTRATION & SOFTENING PLANT
- IRON REMOVAL FILTRATION AGITATOR, DECANTER, OIL SKIMMER
- MIXER, MECHANICAL & MANUAL BARS SCREENS SLUDGE DEWATERING & DISPOSAL UNIT
- R.O. ANTISCALANT, ALUM SALT, PH BOOSTER DDM PLANT RESIN, SOFTENER RESIN, PROBIOTIC

## Services

- ENGINEERING & DESIGN PROCUREMENT
- MANAGEMENT PROJECT MANAGEMENT
- CONSTRUCTION MANAGEMENT
- ELECTROMECHANICAL INSTALLATION MANAGEMENT
- OPERATION & MAINTAINANCE MANAGEMENT



## The Company

We would like to introduce ourselves as a leading company "BS Enviro N Infracon Pvt Ltd", in the field of Water & Waste-Water Treatment Technology. We see Water & Waste Water treatment and pollution free sources for our future.

The economy on our future world relies on Green technologies and Waste Management. We are an established and popular company with an excellent record of accomplishment in Water Management field.

BS Enviro is green initiative company with tremendous growth in short span of time.

We  
**provide**  
solutions <sup>and</sup> services

We provide solutions and services Water Management technology. We took a step forward to make environment clean.

Our prime focus is on Water & Waste-Water Treatment Plants. We are leading firm in this field and have outstanding proven works. We have well qualified and experienced staff and with their best ideas we deal with aerobic technologies like **MBBR, SBR, MBR, SAFF, Extended aeration, Advanced MBBR (PVA Gel) etc.** and anaerobic technologies like **UASB, DAFF, ABR, Dewat** also with **Natural Root zone water (wetland) treatment.** We deal in designing and Execution of Water & Waste- Water Management projects.





## VISION

Our Vision is to become a world class company in the field of Water Management technology. We want to achieve the top most position in the area of Water Management technology providers.



## MISSION

Our Mission is to fully integrate environmental stewardship into our business by minimizing waste-water disposal and maximizing recycling and recovery for our customers'.

## GOAL

Our Goal is to achieve sustainable development and we are fully committed to balance out the creation of economic, environmental and social values.

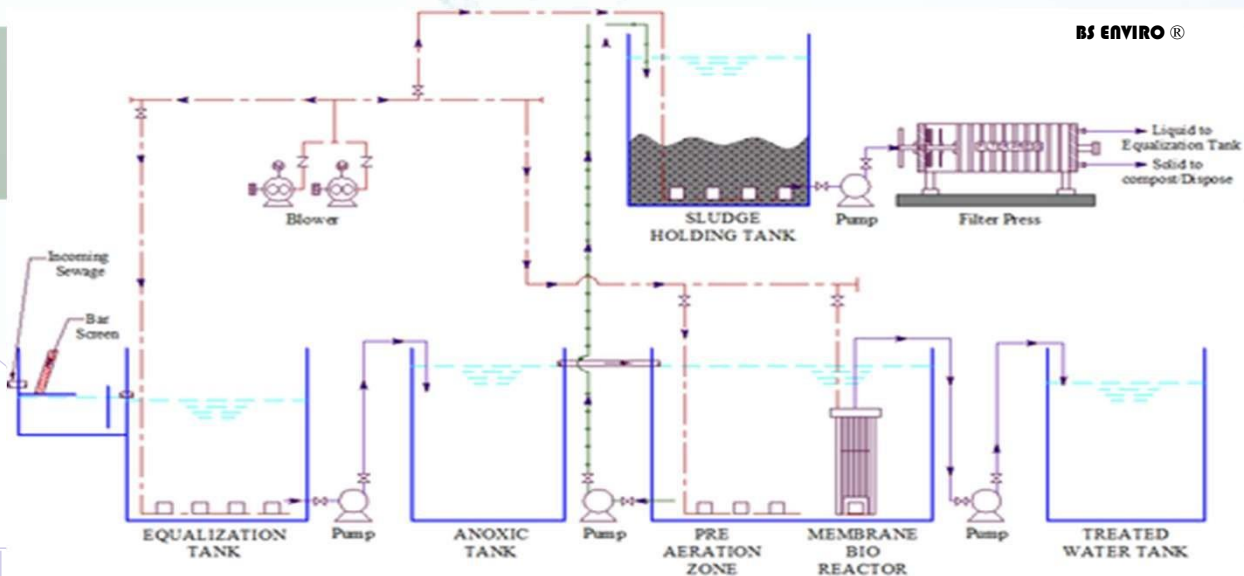




## STP Technology

# Membrane Bio Reactor (MBR)

Membrane Bioreactors combine conventional biological treatment (e.g. activated sludge) processes with membrane filtration to provide an advanced level of organic and suspended solids removal. When designed accordingly, these systems can also provide an advanced level of nutrient removal. In an MBR system, the membranes are submerged in an aerated biological reactor. The membranes have porosities ranging from 0.035 microns to 0.4 microns (depending on the manufacturer), which is considered between micro and ultrafiltration.



This level of filtration allows for high quality effluent to be drawn through the membranes and eliminates the sedimentation and filtration processes typically used for wastewater treatment. Because the need for sedimentation is eliminated, the biological process can operate at a much higher mixed liquor concentration. This dramatically reduces the process tankage required and allows many existing plants to be upgraded without adding new tanks. To provide optimal aeration and scour around the membranes, the mixed liquor is typically kept in the 1.0-1.2% solids range, which is 4 times that of a conventional plant.

### Advantage :

1. Secondary clarifiers and tertiary filtration processes are eliminated, thereby reducing plant footprint. In certain instances, footprint can be further reduced because other process units such as digesters or UV disinfection can also be eliminated/minimized (dependent upon governing regulations)
2. Can be designed to prolong sludge age, hence lower sludge production.
3. High effluent quality.
4. High loading rate capability.

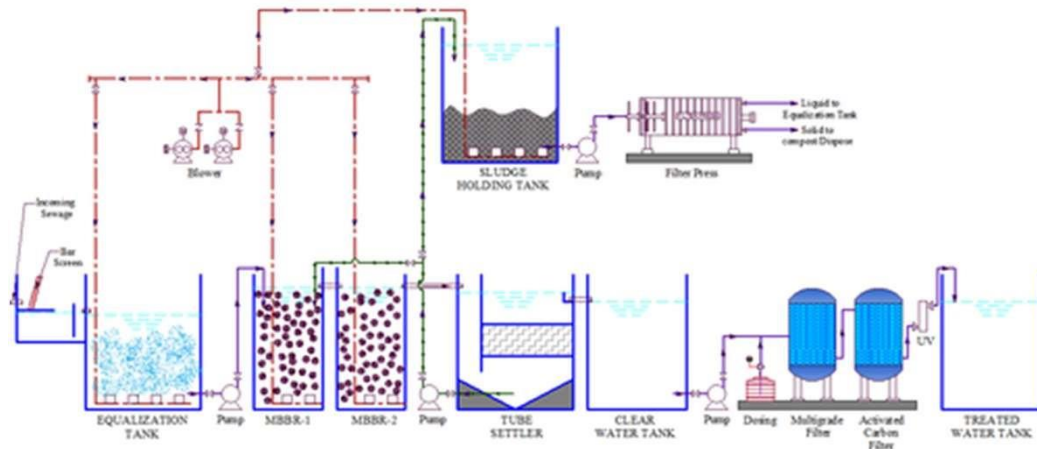


## STP Technology

# MBBR/Advanced MBBR

Moving-Bed Bioreactors (MBBRs) utilize attached growth media as a substrate for the formation of treatment biofilms. This media is circulated in aerated treatment reactors ensuring excellent oxygen and substrate transfer to the biomass. MBBR reactors are ideal for both aerobic and anoxic processes and are utilized with mechanical mixers for circulation in anoxic reactors for efficient nitrogen removal.

BS ENVIRO®



Advanced MBBR media provides not only a large surface area for biofilm formation but also an electrostatic surface charge. Charged surfaces on the media are biologically regenerated as ammonium ions which are adsorbed and then subsequently nitrified by the biofilm and desorbed. These reactive surfaces increase treatment efficiency and buffer the biofilm communities against toxic compounds in the wastewater.

Due to the high surface area and surface charge of the media and the robust microbiological communities, MBBRs are ideally suited for high-strength, industrial wastewater applications. In existing wastewater plants, the addition of moving media can expand treatment capacity and improve effluent quality without incurring additional footprint.

### FEATURES & BENEFITS

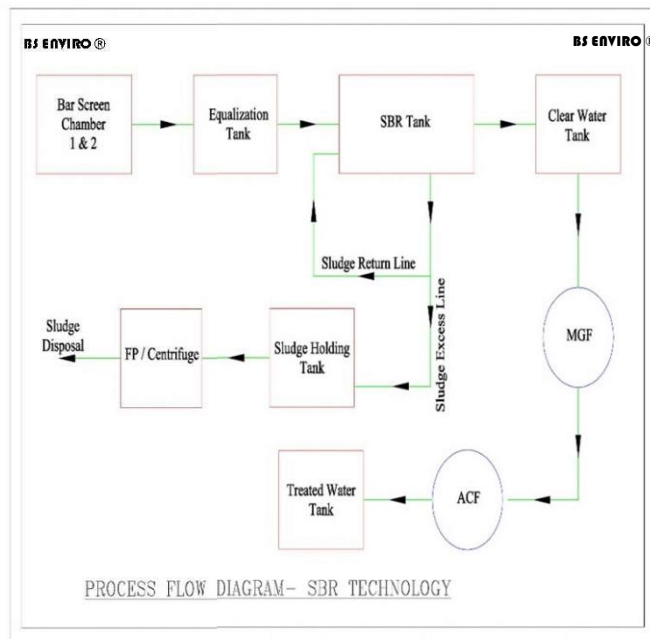
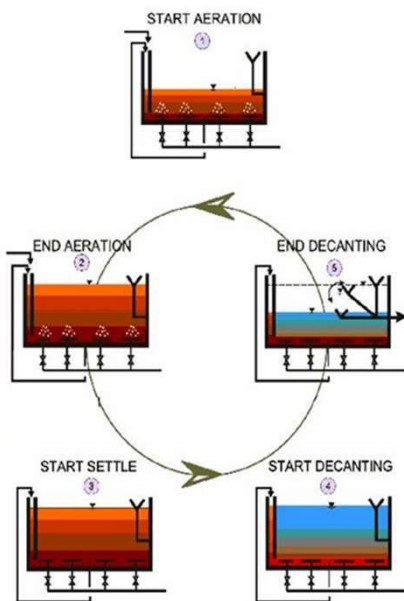
1. Automatic solid excluding design is based entirely on gravity and differential pressure.
2. A fully floating design that moves up and down with the changing water level.
3. Flexible connection in the basin.
4. Evenly spread decanting holes are located just under the water surface.
5. System requires no conventional valves or pumps.
6. Moves freely in vertical plane with maximum distance from settled sludge in the decanting process.
7. Creates low flow velocity with no risk of eddies and sludge migration.
8. Patented design prevents unwanted solids from entering the outflow pipe.
9. Virtually Maintenance Free.
10. Years of reliable performance around the world.



# STP Technology

## Sequential Batch Reactor Basin

SBR is a sequential batch reactor process. It provides highest treatment efficiency possible in a single step biological process. SBR – System is operated in a batch reactor mode which eliminates all the inefficiencies of the continuous processes. A batch reactor is a perfect reactor, which ensures 100% treatment. Two modules are provided to ensure continuous treatment and into some case one module. The complete process takes place in a single reactor, within which all biological treatment steps take place sequentially.



**NO additional settling unit / secondary clarifier is required!**

The complete biological operation is divided into cycles. Each cycle is of 3–5 hrs. duration, during which all treatment steps take place. In the SBR Basin 70% down side hydraulic volume for sludge and 30% up side hydraulic volume for biological process of water.

### Explanation of cyclic operation:

A basic cycle comprises:

1. Fill-Aeration (F/A)
2. Settlement (S)
3. Decanting (D)

### A Typical Cycle

During the period of a cycle, the liquid is filled in the SBR Basin up to a set operating water level. Aeration Blowers are started for aeration of the effluent. After the aeration cycle, the biomass settles under perfect settling conditions. Once Settled the supernatant is removed from the top using a DECANTER. Solids are wasted from the tanks during the decanting phase. These phases in a sequence constitute a cycle, which is then repeated.





# SBR Water SBR Basin

## **SBR Basin Consists :-**

1. AIRBlowers
2. Fine BubbleDiffuser
3. DecanterSystem
4. Pipes & Fittings for Air piping & AirGrid
5. Level Controller & Accessories
6. PLC For SBRSystem
7. Dissolve OxygenMeter
8. Motorised Valve for Decanter, Air Distribution & Distribution Chamber



## **FEATURES & BENEFITS**

1. Automatic solid excluding design is based entirely on gravity and differential pressure.
2. A fully floating design that moves up and down with the changing water level.
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# Water Filter

## Multigrade/Pressure/Dual Media

Our company is a prominent manufacturer of multi grade filter and provides engineering services from designing, manufacturing to installation and commissioning. Our Multigrade sand filtration plants are designed to meet specific requirements of our customers; no matter what quality of water you use and what your flow rate requirements are, our engineering team is capable of configuring the same accordingly, we can manufacture and supply any capacity you need.



1. Carbon
2. Gravels & Pables
3. Strainer Plate
4. Strainers
5. Hand hole
6. Service Inlet
7. Service Outlet
8. Air vent
9. Davit Arm
10. Backwash Inlet
11. Air Scoring

Activated Carbon Filter

MULTIGRADE SAND FILTER			
Model	Flow Rate (LPH)	Vessel Dia. (mm)	Vessel Height (mm)
BEC-MGF 5	5000	600	2200
BEC-MGF 10	10000	800	2200
BEC-MGF 15	15000	1000	2200
BEC-MGF 20	20000	1000	2200
BEC-MGF 25	25000	1200	2200
BEC-MGF 30	30000	1400	2200
BEC-MGF 35	35000	1400	2200
BEC-MGF 40	40000	1600	2200
BEC-MGF 45	45000	1600	2200
BEC-MGF 50	50000	1800	2200
BEC-MGF 55	55000	1800	2200
BEC-MGF 60	60000	1800	2200
BEC-MGF 65	65000	2000	2200
BEC-MGF 70	70000	2000	2200
BEC-MGF 75	75000	2000	2200
BEC-MGF 80	80000	2200	2200
BEC-MGF 85	85000	2200	2200
BEC-MGF 90	90000	2200	2200
BEC-MGF 95	95000	2400	2200
BEC-MGF 100	100000	2400	2200

**Note: Lower or Higher flow vessel design will be provided as per demand of Client.**

### Working Principle

A latest concept in the water treatment technology, a Multi Grade Filter consists of vertical or horizontal pressure sand filters that contain multiple layers of coarse and fine sand (pebbles and gravels) in a fixed proportion. It is a kind of a deep filter bed with adequate pore dimensions for retaining both large and small suspended solids and undissolved impurities like dust particles. As compared to conventional sand water filter, this Multigrade filtration system works on higher specific flow rates.

It is also a low-cost pre-treatment system for ion exchangers (deionizer and softener) and membrane systems such as reverse osmosis etc. With high throughputs, high dirt-holding capacity and capacity to reduce turbidity and TSS (< 20 ppm) from water, it protects ion-exchanger resins and membranes from physical fouling due to suspended impurities present in the water. The next and last step is backwashing, a process of effectively removal of captured contaminants from the media bed.





# Water Filter

## Activated Carbon Filter

Activated Carbon Filter is widely accepted system in water filtration techniques. The treated water is free from chloramines (chlorine and ammonia mixture) and organic compounds; therefore, best for discharge and production use. Activated Carbon Filter is also utilized in pre-treatment for RO water plant and DM plant as the treated water keeps these systems safe from oxidation or organic fouling.



ACTIVATED CARBON FILTER			
Model	Flow Rate (LPH)	Vessel Dia. (mm)	Vessel Height (mm)
BEC-ACF 5	5000	600	2200
BEC-ACF 10	10000	800	2200
BEC-ACF 15	15000	1000	2200
BEC-ACF 20	20000	1000	2200
BEC-ACF 25	25000	1200	2200
BEC-ACF 30	30000	1400	2200
BEC-ACF 35	35000	1400	2200
BEC-ACF 40	40000	1600	2200
BEC-ACF 45	45000	1600	2200
BEC-ACF 50	50000	1800	2200
BEC-ACF 55	55000	1800	2200
BEC-ACF 60	60000	1800	2200
BEC-ACF 65	65000	2000	2200
BEC-ACF 70	70000	2000	2200
BEC-ACF 75	75000	2000	2200
BEC-ACF 80	80000	2200	2200
BEC-ACF 85	85000	2200	2200
BEC-ACF 90	90000	2200	2200
BEC-ACF 95	95000	2400	2200
BEC-ACF 100	100000	2400	2200

**Note: Lower or Higher flow vessel design will be provided as per demand of Client.**

### Activated Carbon Filter Working Principle

An activated carbon filter (ACF) works on the principle of adsorption; filter medium adsorbs or reacts with a pollutant molecule then filtered water is drained out. Activated carbon which is used as medium to remove contaminants is natural material derived from coconut shell, lignite, bituminous coal etc. further, activated by chemical or steam under absence of oxygen with high temperature around 1000°C.

### Which Activated Carbon is Right for You?

There are two types of activated carbons available, Granules Activated Carbon (GAC) and Powdered Activated Carbon (PAC); In general, Granule Activated Carbon is made by steam activation of coal and is widely used in purifying drinking water, whereas Powdered Activated Carbon is produced by steam activation of lignite coal under carefully controlled conditions and is used in treating (removes toxic organics along with BOD, COD and TOC) industrial wastewater, process water and highly contaminated municipal wastewater.



# Water Filter Softener

Industrial water softener is a kind of water filter, which removes hardness from water causes due to presence of Calcium and Magnesium. For industries and commercial units, hard water poses a potential threat. The performance of boilers, cooling towers and other associated equipment adversely affected by scaling caused by hard water. Water Softener is considered as concrete solution for this problem, which prevents scale forming. we deal in industrial hard water treatment with manufacturing of water softener.



SOFTENER			
Model	Flow Rate (LPH)	Vessel Dia. (mm)	Vessel Height (mm)
BEC-SOFT 5	5000	600	1800
BEC-SOFT 10	10000	800	1800
BEC-SOFT 15	15000	1000	1800
BEC-SOFT 20	20000	1000	1800
BEC-SOFT 25	25000	1200	1800
BEC-SOFT 30	30000	1400	1800
BEC-SOFT 35	35000	1400	1800
BEC-SOFT 40	40000	1600	1800
BEC-SOFT 45	45000	1600	1800
BEC-SOFT 50	50000	1800	1800
BEC-SOFT 55	55000	1800	1800
BEC-SOFT 60	60000	1800	1800
BEC-SOFT 65	65000	2000	1800
BEC-SOFT 70	70000	2000	1800
BEC-SOFT 75	75000	2000	1800
BEC-SOFT 80	80000	2200	1800
BEC-SOFT 85	85000	2200	1800
BEC-SOFT 90	90000	2200	1800
BEC-SOFT 95	95000	2400	1800
BEC-SOFT 100	100000	2400	1800

**Note : Lower or Higher flow vessel design will be provide as per demand of Client.**

Size or capacity and design depend upon many factors such as, flow rate requirements (LPH or GPD), TDS level and Regeneration frequency etc.

1. Volume of water to betreated.
2. Hardness of water. (Above given for the hardness up to 300ppm)
3. Regeneration frequency in aday.

**Industrial Water Softener Applications :-**

1. Hospitals andhealthcare
2. Hotels andresorts
3. Food processingunits
4. Cooling tower feedwater
5. Boiler feedwater
6. Humidification and airconditioning
7. Pharmaceuticalindustry
8. Oil andgas
9. Restaurant
10. Heatingsystem



## Water Filter

# Iron Removal Unit

Ingroundwaterortubewell,waterpresenceofironandmanganesehasalways been a matter of concern. Presence of these elements in water does not pose a risk to human health but it can cause unpleasing taste, odour and staining, which is not accepted in most of applications in domestic use as well as commercial and industrial use; therefore, oxidation filtration often known as iron removal process is employed to remove naturally occurring iron and manganese from water. For this complete iron and manganese removal process an iron removal filter is utilized. For domestic (home) and light applications portable iron removal filter is enough, while for commercial and industrial use large iron removing (DE ironing) plant is required.



### Iron Removal Working Principle

The process through which iron is removed from water is known as Oxidation Filtration that involves the oxidation of the soluble forms of iron (Fe) and manganese (Mn) to their insoluble forms and then removal by filtration. The oxidant chemically oxidizes the iron and manganese (forming a particle), and kills iron bacteria and any other disease-causing bacteria that may be present after that the filter removes the iron and manganese particles.

### Design Consideration

In order to design an accurate iron removal plant for your unit, a thorough analysis of water quality is mandatory, which may include following:

1. Water test report (pH, Iron, Manganese & TDS etc.)
2. Volume of water you expect to use per hour
3. Your peak water demands
4. Water pressure
5. Plant running duration per day
6. End use of water





# Membrane Water Treatment

## Ultra-filtration Unit

Ultrafiltration Plant is used in both pre-treatment and post treatment of water. we manufacture and install custom made ultrafiltration Water systems (UF Systems), units can be semi or fully programmable and PLC controlled. These are extensively used in industrial water and wastewater treatment applications. These units are next generation equipment, designed to minimize investment cost and maximize performance meeting stringent environmental protection requirements.

Ultrafiltrationsystemsaremodularunitsfixedonaskidframefittedwithinletandoutletand product water connections. There are various optional components are available on request that can added as per clients'requirements.



### Ultrafiltration Process

Ultrafiltration is another type of membrane filtration, which is pressure driven water filtration process. In ultrafiltration process membrane pore size plays important role; feed water is pressed into modules through pump, depending upon the specific pore size of membranes contaminants are rejected and filtered water is taken out in storage tank or further sent as RO feedwater.

Ultrafiltration is considered more effective as compared to traditional water filtration. An ultrafiltration system is used in turbidity removal; in addition, it also removes bacteria, virus, microorganisms, particulate material, and natural organic materials from the water.

### Ultrafiltration System Applications

1. Packaged drinking water
2. Surface water filtration
3. RO feedwater
4. Latex paint wastewater treatment
5. Oil removal / Oil refining process
6. Petrochemical waste water treatment
7. Dialysis machine
8. Municipal water
9. Effluent recycles



# Membrane Water Treatment

## Reverse Osmosis Unit

We design, manufacture and install RO Plant for drinking, commercial, industrial and laboratory research applications and juice concentration while meeting region specific water standards and certifications. In addition to standard models, we also manufacture customized units based on your specific requirements such as flow rates, membrane types, and end use and operational and control choices. We assure you of unmatched price quote and product service.



### **RO Plant Pre-Treatment**

An efficient pre-treatment is essential to enhance performance, membrane life and overall operating cost. As particulate matter presents in raw water, it becomes mandatory to pre-treat feed water in order to protect membranes from fouling or damaging; therefore, pre-treatment directly impacts the performance of reverse osmosis membranes. It is the quality of feed water, which decides which pre-treatment method is required; media filtration (MGF/ACF), Bag Filter, UV filtration and Ultrafiltration are common reverse osmosis pre-treatment solutions.

### **RO Plant Applications**

1. Drinking Water Agriculture & household Supply
2. Brewery or brewing
3. Car washing
4. Dialysis
5. Dentists and clinical practices
6. Boiler feed water
7. Fish tank aquarium
8. Hotels and restaurants
9. Laboratory use & ice machines
10. Pharmaceutical
11. Food & juice industries
12. Textile effluent treatment
13. Wastewater treatment



## Mixer / Agitator

### Low, Mid, High Range Agitator

BS ENVIRO®



#### Characteristics of Low Range Agitator

1. For 1 to 11 cubic meters water for all of our industries.
2. Core to this line of mixers is the portable mixerline.
3. Motors HP Range – 1/4 TO 2HP.
4. Gear Reduction availability – DIRECT, 5:1, 10:1,20:1
5. Low RPM mixing with substantial torque available.
6. Mount: Plate, Flange.
7. Adaptable to any type of tank – Circular, Rectangular etc.
8. IMPELLERS - A full range enables your mixer to deliver perfect mixing quality

#### Characteristic of Mid Range Agitator

1. For 10 to 35 cubic meter Tanks.
2. High efficiency design configured for medium-duty applications.
3. Parallel shaft with high quality helical gears.
4. Gears provide long and quiet operation.
5. Process and Storage Tanks require agitators of varying levels of “duty”. Mixers can be used as an agitator in many tanks.
6. Motors HP Range – 1 to 5HP.
7. Gear – Minimum Service Factor of 1.5 that ensures continuous operation to heavy loads
8. Mount – Plate, Flange.
9. Bearings – Heavy-Duty Over-sized, tapered heavy duty output roller bearings, and can withstand the heaviest loads.
10. Oil Seal to protect gearbox from the environment and offers redundant protection of your application from contamination.
11. Housing – Iron - Strong and Rigid.
12. Shaft Mounting – Hollow quill coupling for ease of field assembly.
13. Impellers – High Efficiency Pitch & design benefits of this impeller include easy installation and an economical price.
14. Materials – Available in all machinable metal, Stainless Steel other Coatings Available

#### Characteristic of High Range Mixer

1. For 2,500 to 100,000+ gallon tanks.
2. Each agitator is designed for the custom application.
3. Heavy-duty gearbox design to ensure substantial usage requirements
4. Accommodates any tank with multiple mounting options
5. Standard High-efficiency impeller.
6. Motors HP Range Standard motors with a power range from 1 to 100HP.
7. Gears are constructed of steel & provide long and quiet operation.
8. The gear reduction ratios from 5:1 & above, providing a wide-range of mixing speeds for all applications.
9. Housing a strong and rigid one-piece housing design is crafted from iron.
10. Heavy-Duty output roller bearings and can withstand the heaviest loads.
11. Oil Seal design protects assembly even in the harshest environments.
12. Shaft mounting options available include hollow quill or solid shaft with flange coupling for ease of assembly in the field.
13. Based on motor horsepower, a minimum gearbox service factor of 2.0 ensures continuous long-term operation under heavy loads.
14. Mounting with Plate, Flange or Pedestal mounts ensure compatibility with a wider range of tanks and supports.





**BS ENVIRO A INFRACON PVT LTD**

## Disinfection Unit

### Ultra-Violet Unit

An ultraviolet unit coupled with a sediment removal pre-filter is an effective way of controlling bacterial contamination in a water supply where the water is not stored before use. The ultraviolet unit is sized according to the flow rate of the system.

**BS ENVIRO®**



#### Applications include:

Well water treatment, manufacturing plants, agriculture, private wells, camp grounds, hotels, bottlers, aquaculture, hospitals, food, restaurants, breweries, laboratories, marine, pharmaceutical, dairies and many other commercial applications.

#### How Ultraviolet Disinfection System Works:-

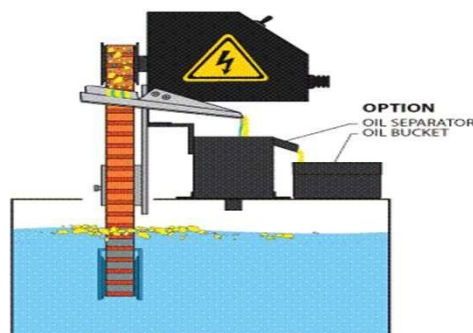
Ultraviolet light alters the DNA material in cells so that bacteria, viruses, moulds, algae and other microorganisms can no longer reproduce. The microorganisms are considered dead, and the risk of disease from them is eliminated. These Ultraviolet Disinfection Systems are designed for commercial & industrial applications. UV Disinfection has an effective kill rate of 99.99% of most living microorganisms such as bacteria & viruses.

**Note:** If your well water has high iron, manganese, sulphur, odour and/or hard water you will need to provide proper pre-treatment before the water enters the UV system.

### Oil Skimmer

Removal of free oils and solids from wastewater at refineries, petrochemical, and other heavy industrial plants, many different industries can prevent water pollution by recovering oily waste with an Oil Skimmer. Oil Skimmer operates unattended in any area of oil accumulation. It will continuously recover floating oil in a condition that permits disposal or reclamation for other industrial purposes. Even the lightest oils from food processing can be easily removed.

**Belt oil skimmers** utilize a belt of stainless steel. This belt is lowered into the liquid that needs to be cleaned. The belt then passes through special **wiper blades**, which remove the oil from both sides of the liquid as it passes through. Disc oil skimmers use a disk that is rotated through the liquid. The oil is wiped off the liquid and placed into a special collection container within the skimmer.





**BS ENVIRO N INFRACON PVT LTD**

## Structure

### Prefab Structure

We offer Containerized STP & ETP plants with MBBR, SBR & MBR technologies which ever is suitable. The Prefabricated plants are constructed in FRP or MS materials.

The treated sewage can be disposed off as per government norms to meet treated sewage disposal quality or can be recycled for various purposes like gardening, toilet flushing, car wash, cooling towers by installing such units which require less space & ensure low wastage of water by reuse or zero discharge application.



#### Advantages: -

1. Significant reduction in space requirement.
2. Low manufacturing costs as compare to RCC Structure.
3. Movable & shift at place as per requirement.
4. Lightweight.
5. Useful for temporary low quantity wastewater treatment.

#### Applications: -

1. Municipal & industrial projects.
2. Housing Societies.
3. Commercial Complexes.
4. Special Economic Zone.
5. Industrial Offices & Park.
6. Small Communities.
7. Hospitals.
8. Shopping Centres.
9. Hotels, Resorts, Golf Courses & clubs.



## Media Biodek Media



### Advantages of Float Media

**Smaller plant footprint:** With a range of media varying from 400 m<sup>2</sup>/m<sup>3</sup> to 500 m<sup>2</sup>/m<sup>3</sup>, MBBR plants based on BIODECK media design occupy significantly smaller areas to treat equivalent sewage/effluent. This leads to saving of land.

**Longer Media life:** The design of the BIODECK media as well as the choice of plastic compounding gives the media a long life.

**Stable treatment with optimum sludge generation:** A high concentration of biomass remains in the reactor which helps in handling uncertain shock loads. In most cases, no recirculation is required.

**Thorough mixing in the reactor:** The low density of the media and the high void ratio helps the media stay in continuous movement in the reactor.

**Easy upkeep and up gradation:** The media can be easily cleaned and serviced with a jet wash. Older conventional systems can be easily upgraded with the addition of Float media.

## Tube Deck Media



**Area of Application:** Includes primary and secondary settling in water as well as wastewater treatment plants with any type of secondary treatment. It is also being very successfully used, to control the outflow of sludge.

**Small Structure Required:** Traditional sedimentation tanks or clarifiers are large structures, occupying much valuable space, are perceived as high investment cost items, Tube deck is a PVC tube settler which offers enhancing capacity for settling of suspended solids in a fractional area.

**Economical:** Tube deck provides the most economical way of improving clarifier performance. Its major application areas are municipal, industrial and wastewater treatment. Tube deck can be installed within settling tanks (both existing & new).

**Improves the Efficiency of Existing Plants:** Tube deck settling media helps to reduce the amount of suspended solid in carrier fluids; thus, improving effluent quality; which in turn improves the efficiency of existing plants. Moreover, with Tube deck, new clarification tanks can be designed in smaller size vice-versa maintain the same performance level, at less cost. The use of Tube deck leads to the formation of large settling areas and small sink paths.

**High settling surface area:** Surface area (10 to 14 m<sup>2</sup>/m<sup>3</sup>) leads to a very small clarifier size and the detention time requirement is also very low when compared to conventional clarifiers.





## Media

### Tubedek Media

#### **Advantages of PVA-gel beads**

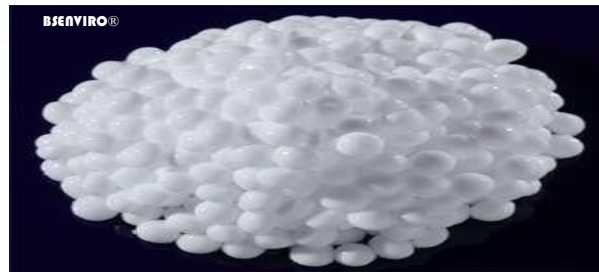
**Easy retrofit (water quantity, loading up)** – Add a PVA-gel tank to an AS one or retrofit an existing treatment (AS) tank to PVA-gel one

**Small footprint** – Reduce tank volume due to high load designing

**Low running cost** - Reduce the cost of excess sludge disposal

Reduce the cost of low-biodegradable substances disposal because of its biodegradation Reduce energy from dewatering and drying

**Increased capacity up to 5 times**



#### **Features of PVA-gel beads**

**Stable immobilization of bacteria** → High load operation

#### **Aerobic (organic treatment)**

Standard 25 kg BOD/m<sup>3</sup> gel · d (2.5 kg BOD/ m<sup>3</sup> tank volume · d)

#### **Nitrification, Denitrification (Nitrate treatment)**

Standard 3 kg N/m<sup>3</sup> gel · d (0.3 kg N/m<sup>3</sup> tank volume · d)

#### **Anaerobic (Methane fermentation)**

Standard 3 kg N/m<sup>3</sup> gel · d (0.3 kg N/m<sup>3</sup> tank volume · d)

**Bacteria rich flora** → Lower excess sludge

#### **Aerobic treatment**

Aerobic treatment: 30% or less of removed BOD

#### **Autolysis treatment**

Autolysis treatment: 5 to 10% of removed BOD

\*It differs according to water qualities.

#### **High biodegradability of organic substances**

Treatment of low degradable substances– Oil and grease, PVA and so on



## Screen

### Mechanical & Manual Screens

#### **MECHANICAL COARSE SCREEN**

**APPLICATION:** Screen is mechanically cleaned coarse screening equipment used to prevent large and medium sized undefined floating waste coming with water in water and waste water pumping stations, river or barrage intake structures and treatment plants.

**SPACING BETWEEN BARS:** 10 mm and above

**MATERIAL OF CONSTRUCTION:** Stainless steel 304, 316 Other grades on request.

**SIZE OF SCREEN:** 500 X 600 mm, 1000 x 1200 mm & larger area on request.

#### **MANUAL COARSE SCREEN**

**APPLICATION:** Screen is manually cleaned coarse screening equipment used to prevent large and medium sized undefined floating waste coming with water in water and waste water pumping stations, river or barrage intake structures and treatment plants.

**SPACING BETWEEN BARS:** 10 mm and above.

**MATERIAL OF CONSTRUCTION:** Stainless steel 304, 316 Other grades on request.

**SIZE OF SCREEN:** 500 X 600 mm, 1000 x 1200 mm & larger area on request.



#### **MECHANICAL FINE SCREEN :-**

**APPLICATION:** Screen is a mechanically cleaned fine screening equipment used to prevent fine sized floating waste from traveling further into water and waste water treatment plants.

**SPACING BETWEEN BARS:** 6 mm & larger spacing on request.

**MATERIAL OF CONSTRUCTION:** Stainless steel 304, 316 & Other grades on request.

**SIZE OF SCREEN:** 500 X 600 mm, 1000 x 1200 mm & larger area on request.

#### **MANUAL FINE SCREEN :-**

**APPLICATION:** Screen is a manual cleaned fine screening equipment used to prevent fine sized floating waste from traveling further into water and waste water treatment plants.

**SPACING BETWEEN BARS:** 6 mm & larger spacing on request.

**MATERIAL OF CONSTRUCTION:** Stainless steel 304, 316 & Other grades on request.

**SIZE OF SCREEN:** 500 X 600 mm, 1000 x 1200 mm & larger area on request.



## Screen

### Basket & Rotary Screen

#### **BASKET SCREEN :-**

The screen basket is constructed of stainless steel sections. When the screen basket is raised, the feed is automatically blocked by a drop screen so that no screenings can get into the outlet channel while the basket is being emptied.

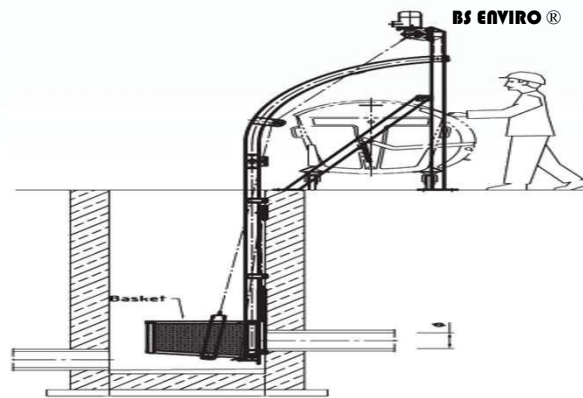
Suitable for deep, small space requirement.

The screen allows the passage of grit without malfunctioning. Screenings conveyed positively to the discharge point.

Excellent cost/performance ratio and easy maintenance.

**WIRE SPACING:** 1 mm to 6 mm

**MATERIAL OF CONSTRUCTION:** Stainless steel 304, 316 & other grades on request.



#### **AUTOMATIC ROTARY SCREEN :-**

**APPLICATION:** Screen is a mechanically cleaned fine screening equipment used to prevent fine sized floating wastes from travelling further in to waste water treatment plants. screen is designed to screen out almost all the fine floating wastes such as plastic bags, pouches, sachets, paper wastes cloths, condoms, weeds, and various other fine fibrous wastes coming with wastewater or effluents.

**WIRE SPACING:** 1 mm to 6 mm

**MATERIAL OF CONSTRUCTION:** Stainless steel 304, 316 & other grades on request







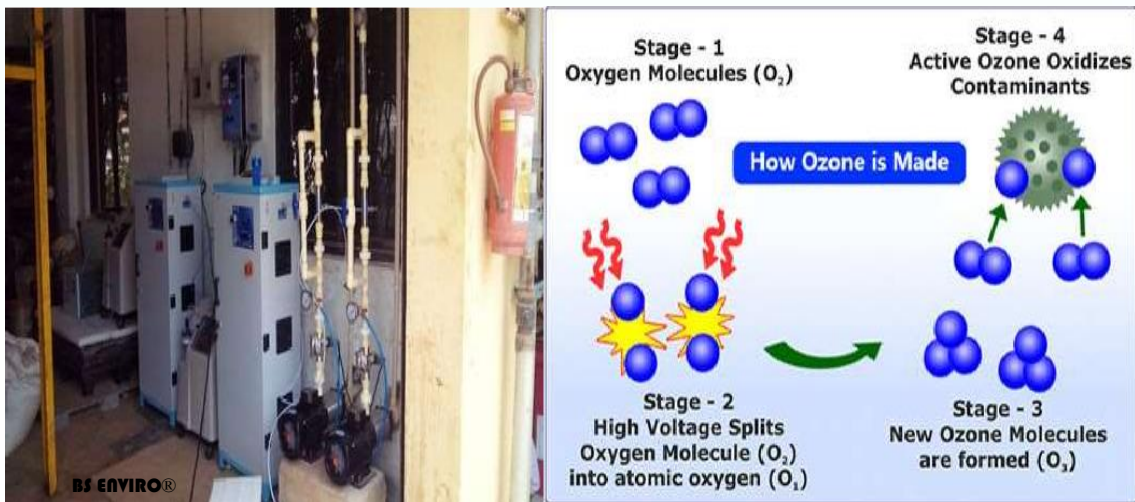
# Oxidation

## Ozonator

The chemical reaction that results in ozone is pretty simple. Ozone is a form of oxygen that is created when electrical energy breaks apart an ordinary oxygen molecule ( $O_2$ ) starting a chemical reaction that results in ozone ( $O_3$ ).

Electrical energy breaks the ordinary  $O_2$  molecule into two  $O_1$  atoms  
The free oxygen atoms unite with other  $O_2$  molecules to produce ozone ( $O_1$ )  
 $+ (O_2) = (O_3)$

Ozone is an unstable molecule because the 3rd oxygen atom is connected to the other two atoms with a weak bond. The weak bond is why ozone is such a powerful sanitizer.



### Applications :-

1. Powerful disinfectant to remove Salmonella, Listeria, E. coli or any number of other dangerous microorganisms.
2. Colourless Treated Water.
3. Odourless Treated Water.
4. Suitable even if there is uneven supply of sewage.
5. Highly suitable for inconsistent sewage.
6. Overall Organic & Inorganic content reduction (BOD & COD), Metals iron, copper and manganese, and inorganic forms of chloramine & Nutrient.
7. Less Sludge Production.
8. Low Space Requirement.
9. Dose not requires continuous operation.
10. Ozone is highly effective in cold water.
11. MLSS and SVI monitoring not required.
12. Environmentally Safe to treat sewage water disposed in Land or Water.
13. Treated flushing, irrigation, construction and many more potables uses.
14. Environmentally Preferred Sanitizer, leaving behind only oxygen.

**Our Valuable****On Going Projects & Client:-****LIST OF ON-GOING PROJECT**

<b>Sr.No.</b>	<b>Project Name</b>	<b>Client Name</b>	<b>Scope of Work</b>
1.	Hostel & Residential Block, NIT Patna	Ahluwalia Contracts Limited	SITC of STP
2.	Gomti Nagar Railway Station, Lucknow	B L Kashyap & Sons Limited	SITC of WTP & STP
3.	HQ Office Building & Residential Complex at Bhubaneswar, Orissa (NTPC)	Ascent Constructions Pvt. Ltd.	SITC of WTP & STP
4.	Tirupati Railway Station	Varindera Constructions Limited	SITC of STP
5.	UIDAI Residential Building, EIL, New Delhi	Parnika Commercial & Estates (P) Ltd.	SITC of WTP & STP
6.	Indian Institute of Management, Sambalpur, Odisha	Dee Vee Projects Limited	SITC of WTP
7.	Bhiwani Medical College, Bhiwani	Pushpdeep Infrastructure Pvt. Limited	SITC of STP & ETP
8.	Government Engineering College, Kishanganj, Bihar	Shanti Construction & Company	SITC of STP
9.	Govt. Medical College and Hospital - Dumka	Larsen & Toubro Limited	SITC of WTP & STP
10.	Government Atal Residential School, Lucknow, UP	Vensa Infrastructure Limited	SITC of STP
11.	Government Atal Residential School, Ayodhya, UP	Vensa Infrastructure Limited	SITC of STP
12.	State Guest House, Bodhgaya, Bihar	Ahluwalia Contracts (India) Limited	SITC of STP
13.	Mental Hospital, Koilwar, Bhojpur	PSK Engineering Construction & Company	SITC of STP & ETP
14.	Pariwahan Parisar, Patna	Ahluwalia Contracts (India) Limited	SITC of STP & ETP
15.	IIM, Sambalpur, Odisha	Dee Vee Projects Limited	SITC of STP
16.	NBCC CCL Tandwa	Ram Kripal Singh Construction Pvt. Ltd.	SITC of STP
17.	Medical College & Hospital, Chhapra (Bihar)	Ahluwalia Contracts (India) Limited	SITC of STP, WTP & ETP

18.	JLN Medical College, Chamba, Himachal Pradesh	Ahluwalia Contracts (India) Limited	SITC of STP & ETP
19.	Bharat Vandana Park, Dwarka Sec-20	NKG Infrastructure	SITC of STP
20.	HCL Office, Noida	Padams Interiors	SITC of WTP & STP
21.	New Assembly Building, Shillong, Meghalaya	BadriRai & Co	SITC of STP, WTP & RO
22.	RK Medical College & Hospital, Hamirpur, HP	Ahluwalia Contracts (India) Limited	SITC of STP, WTP, ETP & RO
23.	Bihar Agriculture University, Bhagpur, Bihar	Mahalasa Constructions Private Limited	SITC of STP
24.	Gorakhpur Haryana AnuVidyutPariyojana, Gorakhpur	Nuclear Power Corporation of India Limited	SITC of STP
25.	Construction of Social Housing at Mare Tabac and Dagotiere, Mauritius	Varindera Constructions Limited	SITC of STP
26.	Rajkiya Medical College, Mirzapur	Uttar Pradesh RajkiyaNirman Nigam Limited	SITC of STP & ETP
27.	Mumbai-Ahmedabad High Speed Rail	B L Kashyap And Sons Ltd.	SITC of WTP & STP
28.	Smart City KingswoodAmrapali	Varindera Constructions Limited	SITC of WTP & STP
29.	B P Mandal Engineering College, Madhepura, Bihar	Dipanshu Promoter & Builder Pvt Ltd	SITC of WTP & STP
30.	Government Medical College Project, Purnea, Bihar	NCC Limited	SITC of WTP & RO
31.	AIIMS, Deoghar	NKG Infrastructure Ltd.	SITC of STP, WTP & ETP
32.	Muthoot Hospital, Dwarka, New Delhi	Ahluwalia Contracts (India) Limited	SITC of STP & ETP
33.	Leh Airport, J & K	ShapoorjiPallonji and Company Pvt. Ltd.	SITC of STP
34.	National Institute of Unani Medicine, Ghaziabad, UP	Rama Civil India Construction Pvt. Ltd. (WAPCOS Ltd.)	SITC of STP, WTP & ETP
35.	Redevelopment of government of India Press, Minto Road, New Delhi	CPWD	SITC of STP
36.	Tata Cancer Hospital, Mohali	ShapoorjiPallonji & Co. Pvt. Ltd.	SITC of STP, ETP & WTP
37.	Ranchi High Court, Jharkhand	BCD, Jharkhand	SITC of STP & WTP
38.	Convention centre cum State Guest House, Guwahati, Assam	State Government of Assam	SITC of STP, WTP, RO system





38.	Income Tax Office, Lucknow	NBCC	SITC of STP
39.	Goa Shipyard, Goa	NBCC	SITC of STP
40.	Govt. Engineering College, Banka	Jharkhand Government	SITC of STP
41.	Haryana Vishvakarma Skill University, Palwal, Haryana	IRCON	SITC of STP
42.	Jammu Bus Stand, Jammu	Shapoorji & Pallonji Group /JDA	SITC of STP
43.	Zakir Hussain College, New Delhi	RITES	SITC of STP & ETP
44.	Department of Science and Technology, New Mehrauli Road, New Delhi	Parnika Commercial & Estates Pvt. Ltd.	SITC of STP

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Our Valuable

Completed Projects & Client:-

**LIST OF RECENTLY COMPLETED PROJECTS**

<b>Sr.N o.</b>	<b>Project Name</b>	<b>Client Name</b>	<b>Scope of Work</b>
1.	Multi-Storeyed two bed-room apartments i/c internal electrification adjoining to pocket-3, Sector 19B Dwarka Phase II	Delhi Development Authority	SITC of STP
2.	Doon Medical College, Dehradun	Uttar Pradesh RajkiyaNirman Nigam Limited	SITC of ETP & STP with Civil Work
3.	National Centre for Medium Range Weather Forcating, Noida	NBCC	SITC of STP
4.	Manufacturing Unit of Stryker Global, Manesar, Gurugram	Stryker Global Centre Pvt Ltd	SITC of ETP & WTP
5.	NiveditaKunj	CPWD	SITC of WTP
6.	IIT Mandi - Himachal Pradesh	CPWD	SITC of STP
7.	300 Bedded Super Specialty Hospital, Maharajganj, (U.P.)	Shanti Foundation / KMC Digital	SITC of STP & ETP
8.	Government Eng. College, Kannauj	Uttar Pradesh RajkiyaNirman Nigam Limited	SITC of STP with civil work
9.	Nalanda Medical College, Nalanda	BMISCL	SITC of ETP & WTP
10.	Govt Engineering College, Mainpuri	Uttar Pradesh RajkiyaNirman Nigam Limited	SITC of STP with civil work
11.	ShriMahantIndiresh Hospital, Dehradun	SGRRIMHS Dehradun	SITC of STP & ETP
12.	Shivpuri Medical College	MPPWD / JP Structure	SITC of STP & ETP
13.	HAL Township, Kanpur	Hindustan Aeronautics Limited	SITC of STP with Civil Work





14.	Employee State Insurance Corporation (ESIC), Korba	ESIC	SITC of STP & ETP
15.	Rani Lakshmi Bai Central Agricultural University, Jhansi	NBCC	SITC of STP
16.	SGRR SMIH, Patel Nagar, Dehradun	SGRR SMIH	SITC of STP & ETP
17.	Uttarakhand Vidhan Sabha, Gairson	NBCC	SITC of STP with Civil Work
18.	Rajmata Vijayaraje Scindia Krishi Vishwavidyalaya, Gwalior	NBCC	SITC of STP & WTP
19.	Vidhan Sabha, Dhurwa, Ranchi	NBCC	SITC of STP
20.	Ranchi Technical University, Ranchi	Engineering Projects India Limited, Delhi	SITC of STP
21.	National Jute Board, Kolkata	NBCC	SITC of STP & WTP
22.	Employee State Insurance Corporation (ESIC), Angul	ESIC	SITC of WTP & STP
23.	BSF Campus, Bhudhaniya, Indore (MP)	Krishna Constructions	SITC of STP

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## **BS ENVIRO N INFRACON PVT LTD**



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