# **SPJ BUILDING SERVICES PVT LTD** SEWAGE TREATMENT PLANT DOMESTIC WASTE STP



## WASTE WATER TREATMENT PLANT & SYSTEM WITH VERY ADVANCE TECHNOLOGY

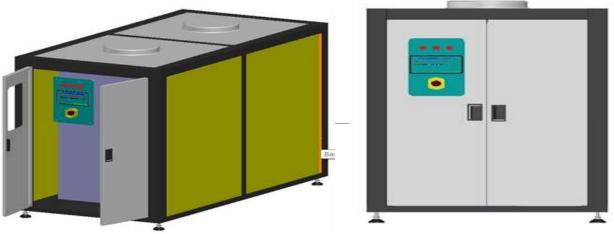
# AUTOMATIC MOBILE DOMESTIC SEWAGE TREATMENT PLANT (AMD-STP)

SPJ BUILDINGS P LTD Containerized compact mobile Sewage Treatment Plant is totally self-contained, covered, single piece packaged treatment system for onsite wastewater treatment. Package STPs are innovative and truly versatile systems for the effective treatment of wastewater, including Nutrient removal. They can be configured for BOD reduction, suspended solids reduction, Ammoniacal and/or total Nitrogen reduction and Phosphorus reduction. membrane Bio Reactor (MBR) with geletic media has been built into the Single Packaged Plant to create the physical-biological treatment with water recycling.

Containerized sewage treatment plant is located inside a standard shipping container; it can be relocated and installed with ease at other locations. In most cases it is a two-day operation and requires a flat bedded truck and a crane. These Containerized Plants can effectively meet the demand of water in remote areas. It can be easily installed and operated and can be moved to new sites. In various environmental and municipal emergencies this plant is preferred.

#### Features & Benefits of STP

- Leading Edge sewage treatment plant
- Incorporate very Advance technology.
- Idea for sites where water reuse is premium.
- High removal efficiency for nitrogen, BOD & COD,
- Fewer process to achieve comparable effluent quality.
- Eliminate Sludge ability Issues.
- Small Foot Prints.
- Reduce sludge yield



	SL	DESCRIPTION	SPECIFICATION					
	No							
	Α	TECHNICAL SPECIFICATION OF ADM-STP						
	1.	PRODUCT NAME	ADMSTP - Automatic Domestic Mobile					
			Sewage Treatment Plant					
	2.	MODEL	PPA - STP - 5000					
	3	CAPACITY	250 LPH – 5000 LPD					
	4	TYPE OF SYSTEM	AUTOMATIC					
	5	ELECTRICAL LOAD	1.0 KW TO 1.5 KW					
	6	MOC	STEEL					
	7	TREATMENT SCHEME	GELETIC NANO MEMBRANE TECHNOLOGY					
	8	MOC OF MOTOR	Standard					
	9	MATERIAL OF HOUSING	HDFRP					
Ī	10	MATERIAL OF SKID	MS					
	11	AERATION SYSTEM	NANO DIFFUSED AERATION					
	12	SOLID SEPERATION	SLUDGE BAG					
	13	INPUT	5000 LITERS/DAY					
	14	OUTPUT	5000 LITERS/DAY					

#### SEWAG TREATMENT PLANT (MBBR)

#### **Preliminary Treatment:**

- screening process.Oil removal process.Sewage mixing process.

#### **Secondary Treatment:**

- Biological treatment process (MBBR/ TRICKLING FILTER/ SAFF/ SBR/EA)
- Secondary sludge settling process.
- Sludge treatment Process.
  BOD & COD removal process.

#### **Tertiary Treatment:**

Depth filtration / Polishing process.Polishing of TSS, SDI, Color, Turbidity, etc.

#### **Fine filtration:**

Ultra filtration – filtration up to 0.1 micron for flushing usages Polishing of, Turbidity, Virus etc.

#### **Disinfection Treatment:**

Bactria/ germ/ covid.Ultra violet treatment & ozonation treatment system final polishing process

#### SPJ BUILDING SERVICES P LTD- STP- MBBR



SEWAG TREATMENT PLANT (MBBR)









## SEWAG TREATMENT PLANT (EA)

# SEWAGE TREATMENT PLANT

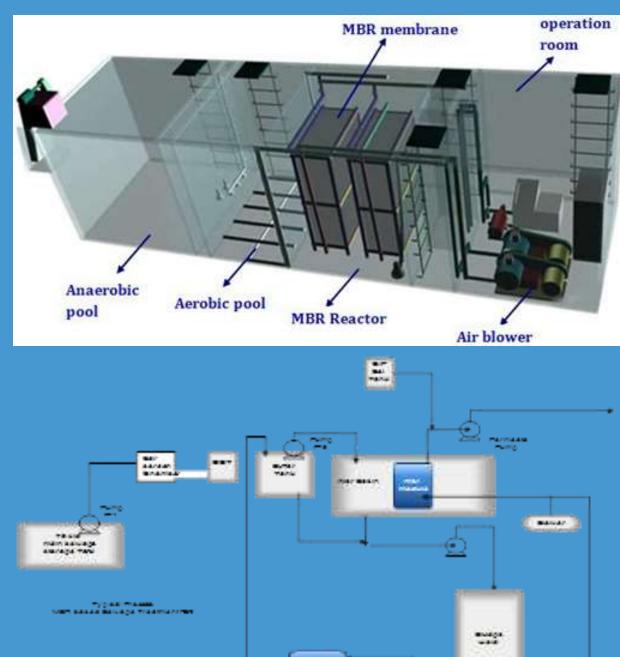
#### (MBR-MEMRANE BIO REACTOR)

#### SEWAGE TREATMENT PLANT BASED ON MBR TECHNOLOGY:

SJP BUIDINGS P LTD Membrane Bioreactor (MBR) can be defined as system integrating biological degradation of waste products with membrane filtration. MBR is composed of two primary parts, the biological unit responsible for the biodegradation of the waste compounds and the membrane module for the physical separation of the treated water from mixed liquor. We have adopted out-ofsystem MBR for its advantage of having single tank process and no human contact operations. The MBR based wastewater treatment provided by us is configured for air-lift and cross flow operations.

Features of the MBR:1 Better control of biological activity

- 2 Effluent that is free of bacteria and pathogens
- 3 Smaller foot print.
- 4 Biodegradation efficiency enhanced 20%~40%
- 5 Short Hydraulic Residence Time (HRT) & Long Sludge Residence Time (SRT)
- 6 Activated sludge increase by 2~3 times
- 7 Higher organic loading rates
- 8 Adopt high strength polypropylene material membrane, easy cleaning, long lifespan to 5-7 years.
- 9 Convenient management with automatic control system.



SPJ BUILDING SERVIECS PVT LTD'S design of Membrane technologies are wastewater treatment processes in which membranes are used as filter elements. These membranes allow water pass through them while retaining suspended solids and other substances. The Membrane Bioreactors (MBR) combine biological processes and membrane technology being an activated sludge treatment whose secondary decanter is replaced by a system for separating solids and liquids using membranes.

MBR technology is based on a simple filtration procedure through a membrane, the porosity of the membranes will have different degrees depending on the type of water to be treated and the process selected. The membranes can be organic or mineral and act as a selective separation barrier, allowing water to pass through on one side, and solid substances and residues to be removed on the other side.

The use of MBR technology in wastewater treatments has allowed the development of solutions for the reuse of water in urban, agricultural, irrigation and other industrial uses. Depending on the size of the pore, the separation process in the membrane is made by microfiltration (MF) or ultrafiltration (UF) and will define the material to be separated at the reactor.

The MBR technology has the following advantages:

Possibility of reuse the water treated for its effluent quality.High waste removal efficiency.

•Capability to remove several contaminants like bacteria, nitrogen, and other suspended solid wastes.

•Occupy less space than other technologies.

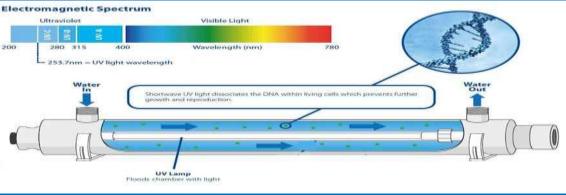
•It produces less volume of sludge.

### SPJ- SEWAGE TREATMENT PLANT( MEMBRANE BIO REACTOR)

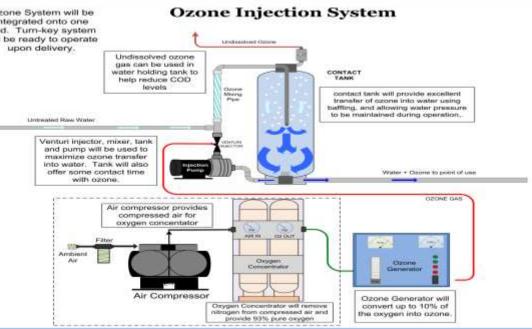
SL	PARTICULARES	25 KLD	50 KLD	75 KLD	100 KLD			
	BAR SCREEN CHAMBER, OIL & GRASE TRAP, EQUALIZATION TANK & TREATED WATER TANK IN CIVIL CLIENT SCOPE.							
1	BAR SCREEN	300 X 500 MM IN SS	400 X 600 MM IN SS	500 X 700 MM IN SS	600 X 800 MM IN SS			
	RAW WATER TREATMEFER PUMP	1.25 M3/HR-2 NO	2.5 M3/HR-2 NO	3.75 M3/HR-2 NO	5 M3/HR-2 NO			
3	ANOXIC MISER	0.5 HP - 1.0 NO	1.0 HP - 1.0 NO	1.0 HP - 1.0 NO	1.5 HP - 1.0 NO			
4	ANOXIC MISXER TANK	1250 LITERS (2.0 X 0.32 M X 2.2 M )-MS-FRP, 5 MM & 2 MM		3000 (2.0 X 0.75 M X 2.2 M )LITERS-MS-FRP, 5 MM & 2 MM	4000(2.0 X 1.0 M X 2.2 M)LITERS-MS-FRP, 5 MM & 2 MM			
5	AIR BLOWER	40 CUM /HR AT 0.4 KG/SQCM - 2.0 NO(1W+1S) KIRLOSKAR	60 CUM /HR AT 0.4 KG/SQCM - 2 NO	90 CUM /HR AT 0.4 KG/SQCM - 2 NO (1W+1S) KIRLOSKAR	90 CUM /HR AT 0.4 KG/SQCM - 2 NO (1W+1S) KIRLOSKAR			
6	MBR TANK		M )LITERS-MS-FRP, 5	8000 (2.0 X 2.0 M X 2.2 M )LITERS-MS-FRP, 5 MM & 2 MM	10000 (2.0 X 2.5 M X 2.2 M ) LITERS-MS-FRP, 5 MM & 2 MM			
7	MBR MODULE	1.25 CUM PER	2.5 CUM PER	4.0 CUM PER	4.0 CUM PER			
8	SUCTION PUMP	1.5 CUM/ HR-2 NO2 NO (1W+1S) KIRLOSKAR	-	4.5CUM/ HR-2 NO2 NO (1W+1S) KIRLOSKAR	6.0 CUM/ HR-2 NO2 NC (1W+1S) KIRLOSKAR			
a	SLUDGE TREANFER PUMP	1.5 CUM AT 8 M HEAD - 2.0 NOS		2.5 CUM AT 8 M HEAD - 2.0 NOS	3.0 CUM AT 8 M HEAD - 2.0 NOS			
10	DOSING SYSTEM	0.5 LPH -1.0 NO	0.5 LPH -1.0 NO	0.5 LPH -1.0 NO	0.5 LPH -1.0 NO			
11	SLUDGE HOLDING TANK	1.5 CUM (2.0 X 0.38 M X 2.2 M ) - 5 MM MS - FRP 2 MM		3.0 CUM (2.0 X 0.75 M X 2.2 M ) - 5 MM MS - FRP 2 MM				
12	FILTER PRESS	300 X 300 MM- PP 8 PLATES MANUAL-1.0 NO, MAKE: PP AQUA	PLATES MANUAL 1.0	300 X 300 MM- PP 12 PLATES MANUAL 1.0 NO, MAKE: PP AQUA	300 X 300 MM- PP 12 PLATES MANUAL -1.0 NO, MAKE: PP AQUA			
13	ELECTRICAL PANNEL & CALBLE	•		1.0 SET, MAKE: MARK ENGG	1.0 SET, MAKE: MARK ENGG			

# **TERTIARY SYSTEM**





# UV (ULTRA-VOILET SYSTEM)



# OZONATION SYSTEM

# MULTI GRADE FILTER & ACTIVATED CARBON FILTER (MGF, DMF, SAF & ACF)

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