

Advanced Sequential Batch Reactor (A-SBR) Sewage Treatment Systems

German Technology

Trouble Free, Energy Efficient and Consistent
High Quality Treated Water < 10 ppm BOD
< 10 ppm TSS for Recycling Purpose.

Capital and Operating Costs
Less than Conventional System



3R TECHNOLOGY

creating environmental solutions

www.3rtechnology.in

Address :

*D-16D, Sri Balaji Towers
Mogappair Industrial Estate,
Mogappair West,*

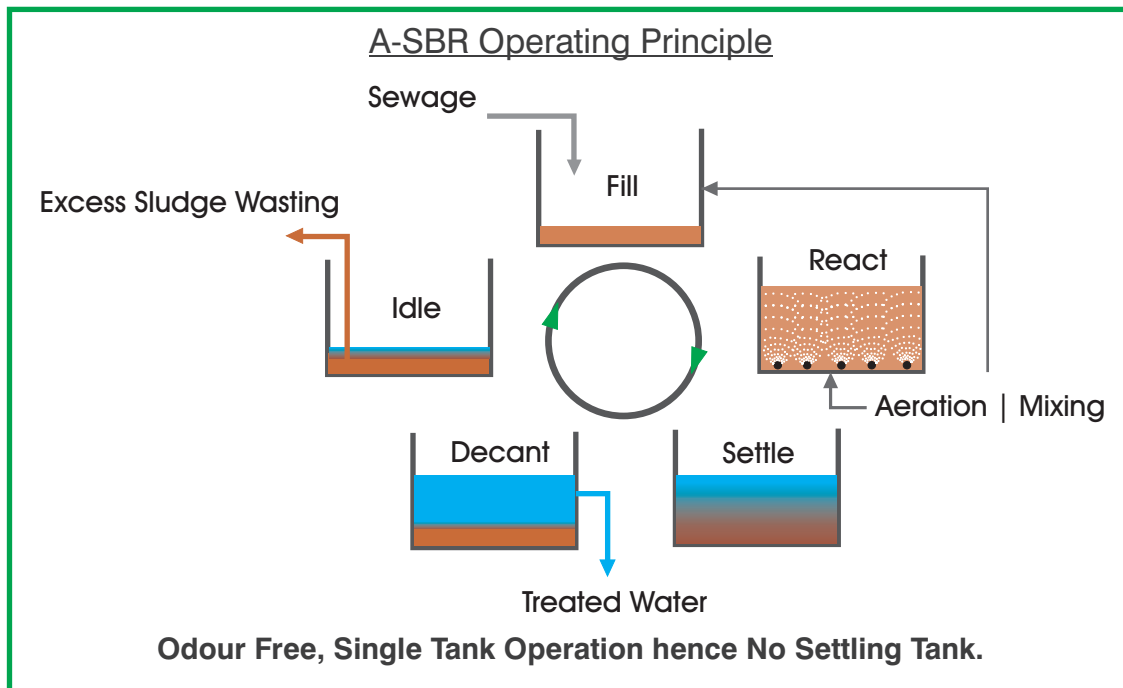
Chennai - 600 035

Tel: 044 26253479

Cell: +91 95660 41349

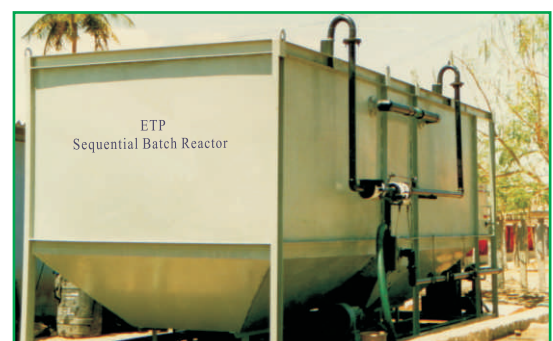
3R TECHNOLOGY, a Technology Development company was established in the year 2009 by Mr. N.Thanikasalam ME(IISc) for Cleaner Technologies. We are currently focusing on High Quality Wastewater Treatment & Reuse Systems, Low Energy Cooling & Ventilation Products and Zero Discharge Evaporator Systems.

3R TECHNOLOGY, introduces A-SBR which brings over 20 years of Industrial SBR expertise in Domestic STP. This delivers Simple, Reliable, and Cost-effective GERMAN Technology for effective Treatment, Recycling for Re-Use in Toilet Flush, Car Washing, Gardening, Ground Recharge, HVAC and other non potable applications.



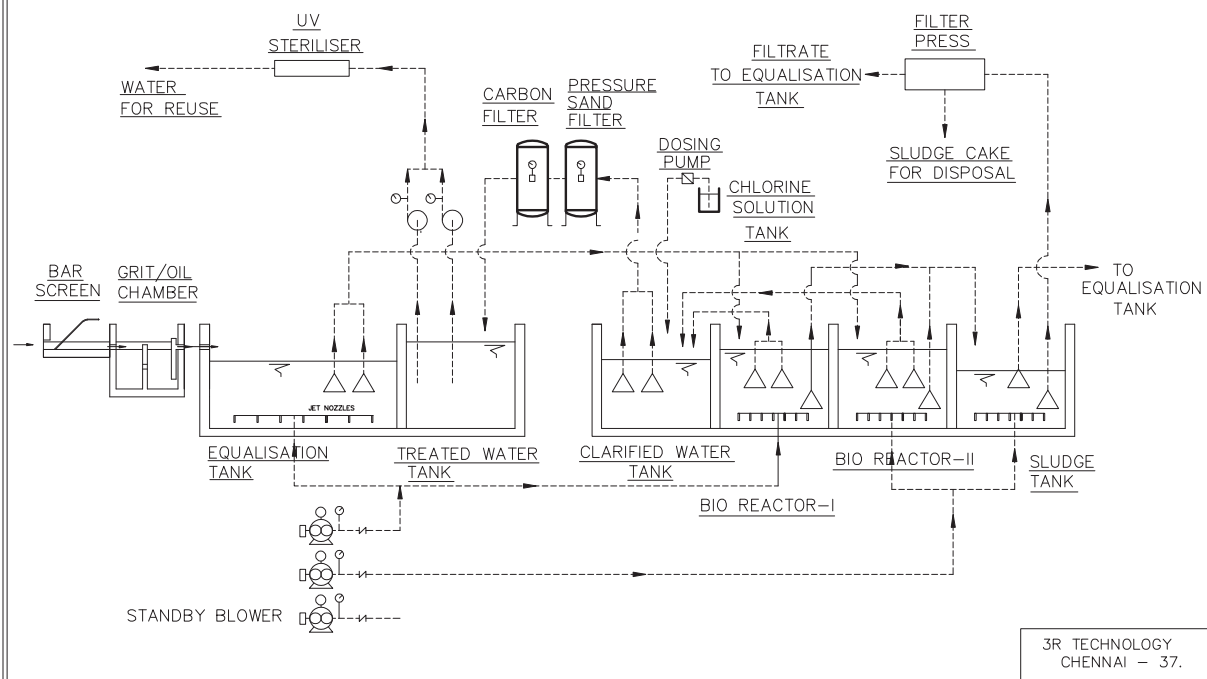
A-SBR Benefits :

- Consistent High Quality Treated Water.
- Single Unit Operation - Saving Space upto 35%.
- Energy Efficient - Saving Power upto 25%.
- Odour Free Operation, most suited for Underground STP Design's.
- Low Maintenance, Require less skilled Operator.
- No need for Continuous Monitoring and Control.
- Automatic Operation with PLC.
- Accommodates Shock Loads.
- Extended life for Sand and Carbon Filters.
- Low Sludge Generation and Reduced Tanker Disposal Costs.
- A-SBR can easily be Retrofitted over Conventional Systems without Additional Space



TYPICAL STP SBR FLOW DIAGRAM FOR 750 kLD CAPACITY

A-SBR is controlled with Automation - PLC.



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A-SBR Features

- Single Tank Unit Operation, hence Settling Tank and Sludge Recirculating System not required. A-SBR eliminates problems faced in Conventional Settling Tanks.
- Complete Retention of suspended organics, biomass in Batch Reactors ensures enhanced bio-degradation of biological wastes, resulting in High quality MLSS. This ensures extended Filter Life.
- Nitrification and De-Nitrification (commonly known as Nutrient Removal) is built with A-SBR for Reducing Nitrogenous BOD resulting in better quality of treated water.
- This System allows for very long sludge retention time. The extended sludge retention allows for complete digestion of sludge within the system thereby greatly reducing the waste disposal issues.
- The output treated water quality is Consistently Maintained due to retention of High quality MLSS in the system even in the event of High or Low Surge flows.
- The Treated water is low in Organics ($\text{BOD} < 10 \text{ ppm}$), ($\text{TSS} < 10$) and Nutrients $< 5\text{-}8 \text{ mg/L TN}$, hence used for all Non Potable applications with Tertiary Treatment.
- Operation is simple and Automated hence minimal operator attention is required due to single unit operation and compact design.
- A-SBR is most suitable for underground STP Designs.
- A-SBR are modular in design and this allows for future expansion.
- The existing Conventional Systems can be easily converted in A-SBR due to their compact design without additional Civil Works.



Typical Analytical Test Results A-SBR

Sl No.	Parameter	Raw Water	Treated Water (before filters)	Permissible Norms (Recycling)
1.	BOD	318 ppm	6 ppm	BOD < 20 ppm
2.	TSS	180 ppm	6 ppm	BOD < 20 ppm
3.	pH	7.8	7.4	6.5 to 8.5

Design, Operation and Management of Conventional STP, especially in Housing Societies pose a Great Challenge to Engineers, Planners due to Inherent Limitation and Complexities to meet consistent Recyclable Water Quality Standards. The present conditions in which Space Requirement, High Power consumption, Manual Operation, Skilled perator requirement and in some cases Un-Scientific designs have failed to deliver expected results. This continues to remain a problem for most housing societies.

Solution for the above conditions have led us to the implementation of World-wide Proven A-SBR (German Technology) with Simple and Reliable Automation.

Projects

- Prince Foundations Pvt Ltd (www.princefoundations.com)
- Prince Greenwoods Apartments - 150 KLD STP (A-SBR Retrofit)
- Prince Infocity 2 - 400 KLD STP (A-SBR Retrofit)
- Prince Tondiarpet 1 & 2 - Ongoing. (Full Project)
- Prince Porur - Ongoing. (Full Project)
- Prince Infocity 1 - Ongoing. (A-SBR Retrofit)



Services offered

Professional O&M Services for A-SBR

Water Auditing

Water Resource Management

Water Recycling Applications
