

Advanced Sequential Batch Reactor (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

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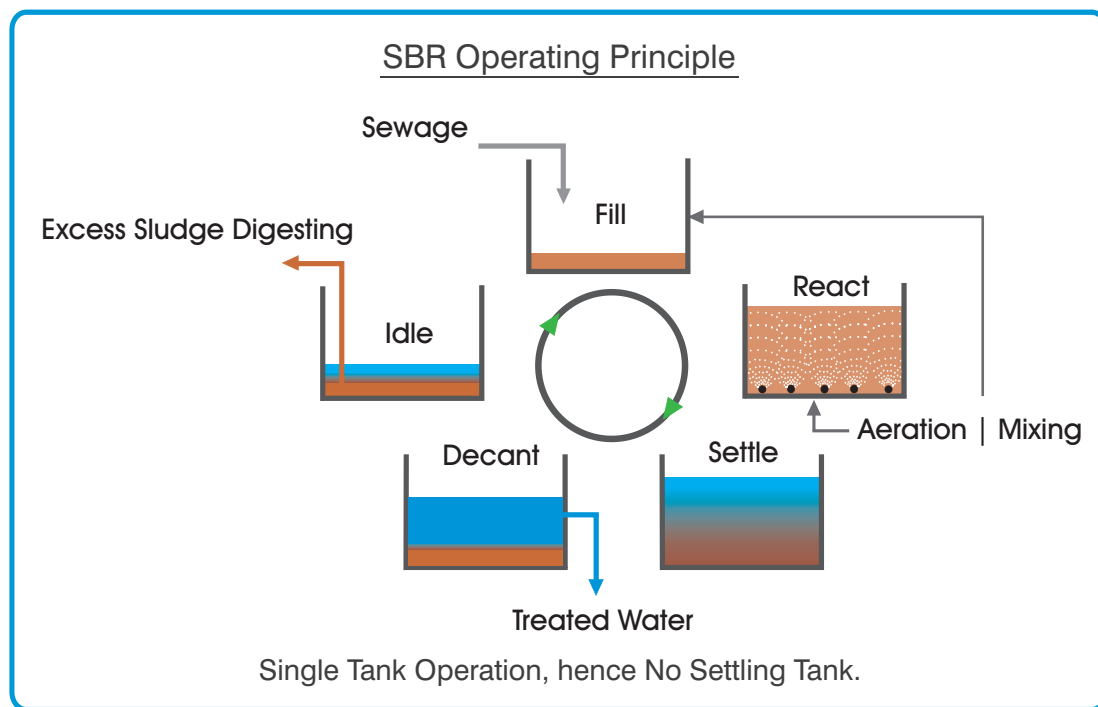
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3R TECHNOLOGY, a Technology Development company was established in the year 2009 by Mr. N.Thanikasalam ME(IISc) for Cleaner Technologies. We are currently focusing on High Quality Wastewater Treatment & Reuse Systems, Low Temperature Vacuum Evaporation, High TDS ZLD Evaporation and Energy Saving Air Conditioning System.

3R TECHNOLOGY, introduces 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.

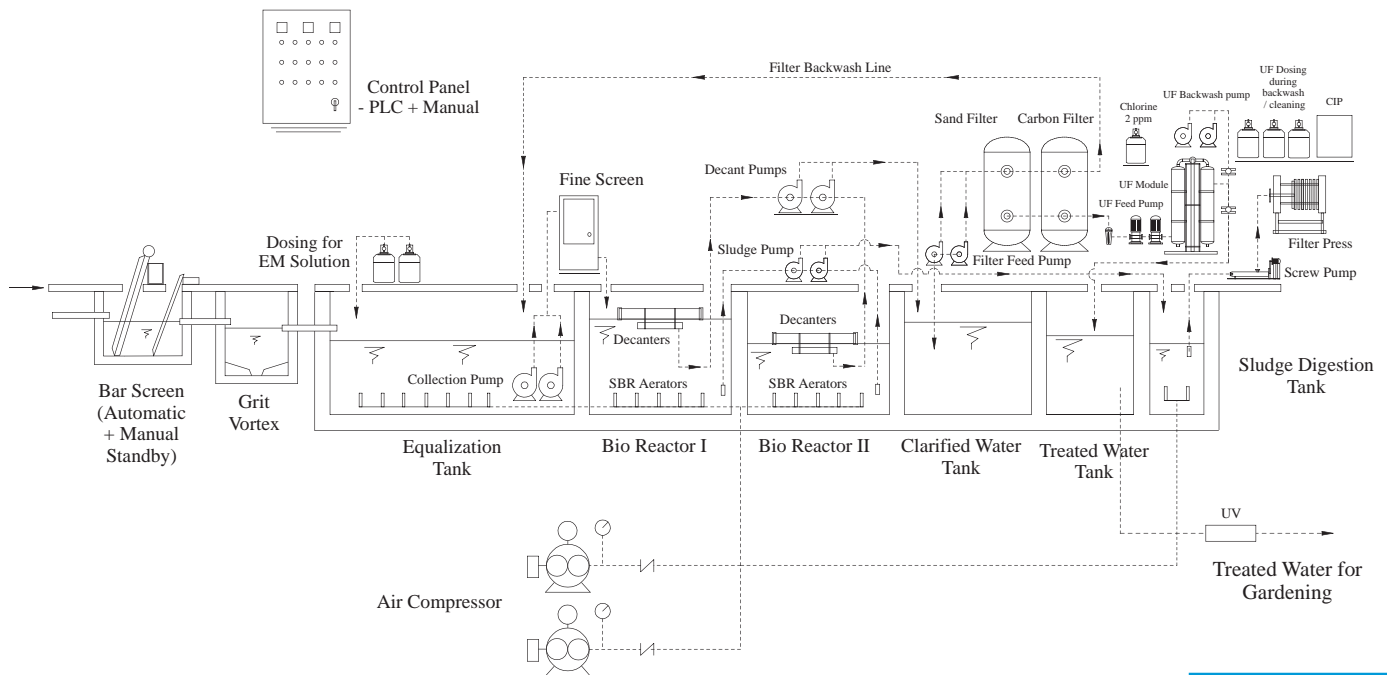


SBR Benefits :

- 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 Tertiary Filters.
- Low Sludge Generation and Reduced Tanker Disposal Costs.
- A-SBR can easily be Retrofitted over Conventional Systems without Additional Space



Schematic : SBR based Sewage Treatment Plant
BOD < 5 & TSS < 5 ppm for Housing Society

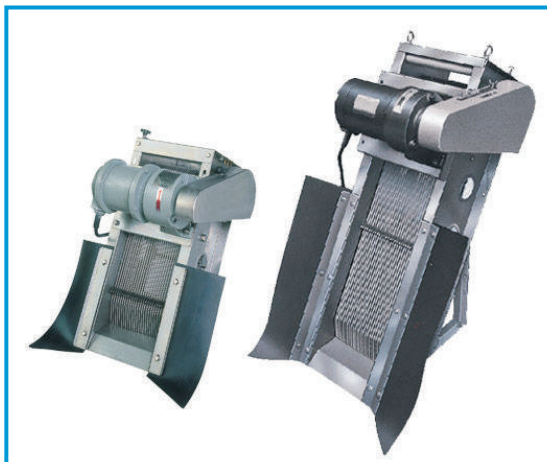


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SBR Features :

- Single Tank Operation, hence No Settling Tanks / Clarifiers.
- Complete Retention of suspended organics, enhanced bio-degradation, resulting in High quality MLSS for Treatment.
- Nitrification and De-Nitrification (Nutrient Removal) can be ensured with SBR Treatment.
- 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 (BOD < 10 ppm), (TSS < 10) and Nutrients < 5-8mg/L TN, hence used for all Non Potable applications with Tertiary Treatment.
- SBR is most suitable for underground STP Designs.
- SBR are modular in design and this allows for future expansion.
- Conventional Systems can be easily converted to SBR due to their compact design without additional Civil Works.

Automatic Bar Screens (Primary Treatment)



SBR Treatment Stages



Typical Analytical Test Results A-SBR

Sl No.	Parameter	Raw Water	Treated Water (before filters)	Permissible Norms (Recycling)
1.	BOD	318 ppm	5 ppm	BOD < 20 ppm
2.	TSS	180 ppm	5 ppm	TSS < 20 ppm
3.	pH	7.8	7.4	6.5 to 8.5

SBR + Ultra Filtration (Tertiary Treatment) will achieve BOD < 5 ppm and TSS < 5 ppm, with extended life for UF Membrane.

Some Reference Projects

- Prince Greenwoods - 150 KLD STP (SBR Retrofit)
- Prince Infocity II - 400 KLD STP (SBR Retrofit)
- Prince Resedenzia - 400 KLD STP (SBR Retrofit)
- Prince Village Phase I - 400 KLD STP (SBR Project)
- Jain Sundarbans - 400 KLD STP (SBR Project)
- Jain Nakstra - 400 KLD STP (SBR Project)
- VGN LP - 140 KLD STP (SBR Retrofit)
- TVH Parkvilla - 180 KLD STP (SBR Retrofit)



Services offered

Professional O&M Services for A-SBR

Water Auditing

Plumbing Design for Water Saving

Water Resource Management

Water Recycling Methods and Applications