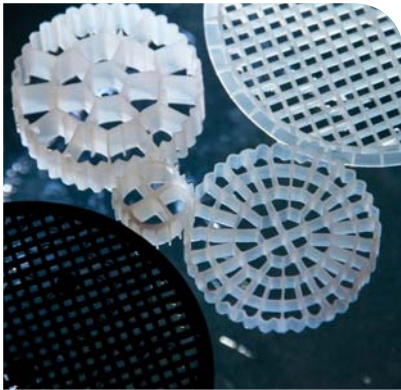


AnoxKaldnes Hybas™ for SBR



Features & Benefits

- Upgrades SBRs for additional ammonia or total nitrogen removal
- Requires little site-civil construction
- Provides a 30% capacity increase over conventional SBRs
- Provides improved nitrification
- Denitrifies with recirculation
- Resists shock loads with biofilm
- Reduces sludge production



Integrated Fixed Film Activated Sludge (IFAS) Solution for SBRs

AnoxKaldnes Hybas™ systems have been retrofitted into a variety of configurations and geometries, including rectangular plug flow reactors, "donut" A2O systems, and now sequencing batch reactor (SBR) systems. The AnoxKaldnes Hybas can increase the capacity of a SBR wastewater treatment process in the same footprint as a conventional SBR without the need for new tankage. The AnoxKaldnes Hybas for SBR uses engineered moving bed media, to grow and foster nitrifying bacteria, even at low SRTs and low reactor temperatures. The process allows for greater nitrification capacity for ammonia (NH₃-N) removal. In addition, with recirculation, the same increase in nitrification capacity allows for both nitrification and denitrification to meet total nitrogen (TN) effluent limits. The AnoxKaldnes Hybas for SBR allows for a 30% increase in treatment capacity for systems needing to meet more strict NH₃-N or TN permit limits.

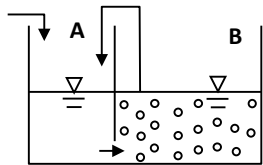


AnoxKaldnes Hybas™ for SBR

Features

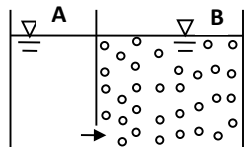
- AnoxKaldnes K5 Biofilm Carriers (SG>1)
- Stainless Steel Media Retention Screens
- Stainless Steel Medium Bubble Aeration System
- Floating, Solids-Excluding Decanter Providing a Constant Discharge Rate
- Internal Recycle System
- Blower Package
- Instrumentation & Control (I&C)
- Process Design and Performance Guarantees

Operating Sequence (NH₃-N Removal)



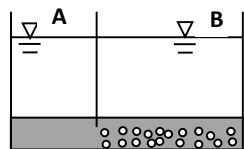
1- FILL

- Reactor A is Aerobic
- Reactor B is Aerobic
- Decant closed
- Recirculation pump running



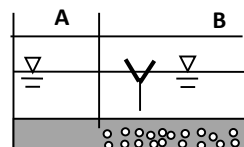
2- REACT

- Reactor A is Aerobic
- No recirculation
- Decant closed



3- SETTLE

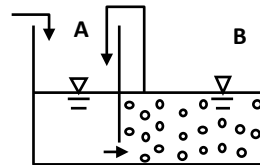
- Mixing and Aeration off
- No recirculation
- Heavy carrier media and suspended biomass settles
- Decant closed



4- DECANT

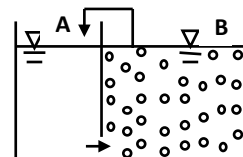
- Decant open
- Mixing and Aeration remain off

Operating Sequence (TN Removal)



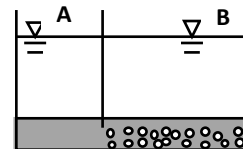
1- FILL

- Reactor A is Anoxic & Mixed
- Reactor B is Aerobic
- Decant closed
- Recirculation pump running



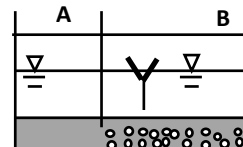
2- REACT

- Reactor A is Anoxic
- Mixed liquor is recirculated from B to A
- Decant closed



3- SETTLE

- Mixing and Aeration off
- No recirculation
- Heavy carrier media and suspended biomass settles
- Decant closed



4- DECANT

- Decant open
- Mixing and Aeration remain off

Contact your local Veolia representative for more information:

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