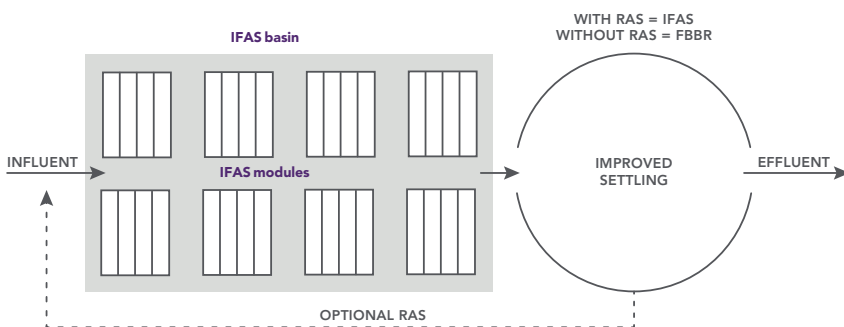


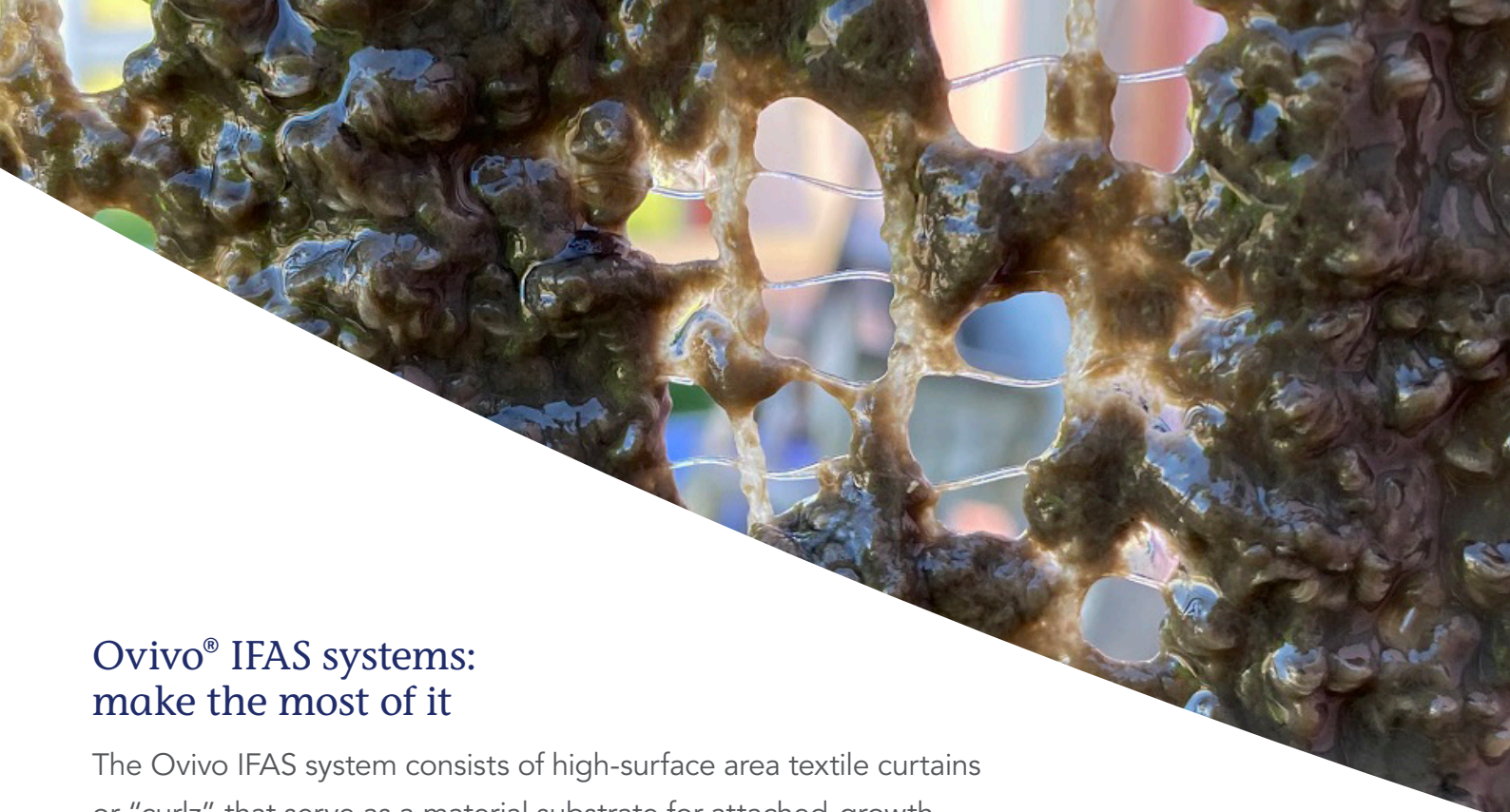


# OVIVO® IFAS SYSTEMS

Increase treatment,  
decrease footprint



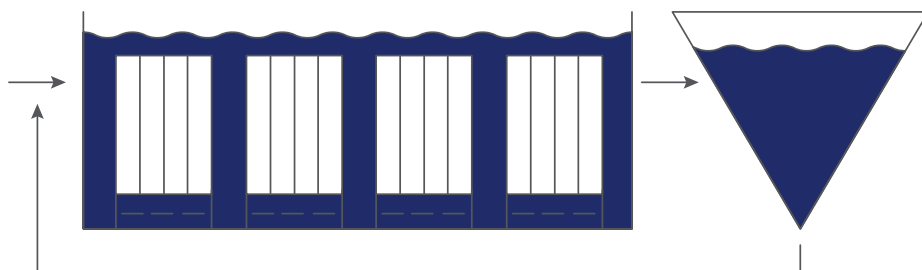
Bringing water to life®



## Ovivo® IFAS systems: make the most of it

The Ovivo IFAS system consists of high-surface area textile curtains or “curlz” that serve as a material substrate for attached-growth biomass. This additional biomass comes in a very compact footprint. The Cleartec media is held in place with rigid support structures, ensuring no risk of media washout into your discharge streams. Aeration and scour of the media is provided by high-efficiency, fine bubble diffusers.

*\*Cleartec Modules are completely submerged under the water surface.*



### HOW IT CAN MEET YOUR NEEDS:

- Most Energy Efficient IFAS System
- No Media Washout
- Simple Install – Easy Retrofit
- Maximize Treatment Capacity with Minimal Footprint
- Promote Nitrification
- Robust Treatment Process
- BNR upgrade

# Ovivo® IFAS stands apart

## MOST ENERGY EFFICIENT AERATION SYSTEM

Most IFAS or MBBR/FBBR systems rely on coarse bubble aeration systems for additional mixing or supplemental scouring. The Ovivo® IFAS system aeration, mixing and scour is completely accomplished using Ovivo AEROSTRIP® Fine Bubble Diffusers, which are installed directly beneath the media. The vertical arrangement of the media ensures there are no dead-zones, which prevents excessive biomass thickness and nuisance organism proliferation.

## NO RETENTION DEVICES

Ovivo® IFAS media is held in place with support frames that are submerged and stationary in the treatment basins. This completely eliminates concerns regarding media migration and head loss in the treatment basins and media washout into downstream processes or worse, into the discharge stream.

## SIMPLE AND EFFECTIVE RETROFITS

The Ovivo® IFAS system is completely modular, which means system retrofits and expansions can be simple and easy. In some cases, the retrofit can be accomplished without even dewatering the existing basins.

## IMPROVED SLUDGE SETTLING

Ovivo® IFAS systems consistently exhibit impressive sludge settleability and low SVI's. This, in conjunction with the fact that a significant portion of the system biomass, the attached-growth portion, remains in the treatment basin means the clarifiers will have it easy. This can translate to smaller clarifiers and reduced footprint in new designs or eliminate the need for new clarifiers in a retrofit expansion.

## BRING ON HIGH MLSS

Due to improved settling and the lack of media screens, which run the risk of blinding, Ovivo® IFAS systems can operate reliably at substantially higher MLSS concentrations compared with other comparable technologies.

## INTERMITTENT AERATION

Fixed-bed biofilm systems are generally much more capable of providing nitrification and denitrification in the same tank. The Ovivo® IFAS system takes full advantage of this and is easily designed to meet full nitrogen removal without the need for dedicated anoxic basins. Intermittent aeration is definitely an option worth considering for BNR.

## Key features



**COMPACT DESIGN**  
for reduced footprint



**NO LOSS OF MEDIA**  
Fixed media with SS Frame



**IMPROVED WATER QUALITY**  
Improves Sludge settling



**ENHANCE CAPACITY**  
Additional media gives more  
Biomass in System



**EFFICIENT NUTRIENT MANAGEMENT**  
Helps in Nitrogen Removal



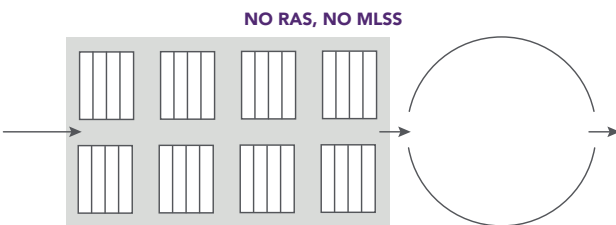
**FLEXIBILITY IN OPERATION**  
ON/OFF air in same Basin  
or Low DO operation



# Ovivo® IFAS processes

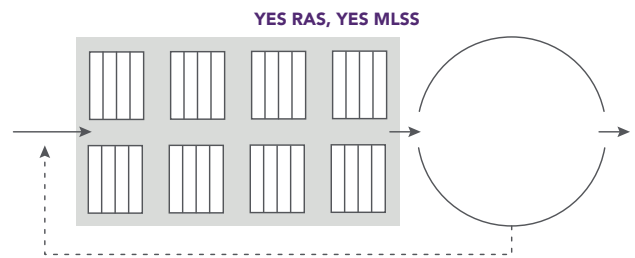
## OVIVO® FBBR SYSTEM

The Ovivo® FBBR (Fixed-Bed BioReactor) system is a single-pass treatment step, similar to MBBR or SAF treatment systems. These systems are efficient and simple to operate. They are ideal for municipal, pretreatment, high-rate, and lagoon systems.



## OVIVO® IFAS SYSTEM

The Ovivo® IFAS (Integrated Fixed-film Activated Sludge) system consists of the best of both activated sludge and attached-growth organisms in a single process. These systems are capable of full BOD and ammonia removal, and can also be easily configured for full BNR (Biological Nutrient Removal).



## Process optimization & control

Ovivo can provide your IFAS installation fully equipped with the latest and most effective control system available. Whether your goal is basic aerobic treatment or full-scale biological nutrient removal, Ovivo can provide it.

### OVIVO: AN ENGINEERING PROCESS POWERHOUSE

The Ovivo Process Team, which consists of decades of biological wastewater treatment plant design and innovation, has provided expertise and design assistance for wastewater treatment plants consisting of all shapes, sizes, and effluent permits.

### CAPABILITIES

- Detail Design Support
- Process Calculations
- Equipment Sizing
- Process Guarantees
- Extended Warranties
- Retrofit Expertise
- Process Training
- Equipment Startup

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Ovivo is a global leader in water solutions for the semiconductor industry and stands as a founding member of the Semiconductor Climate Consortium (SCC), a pioneering initiative dedicated to fostering climate progress within the industry.

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