BIOWATER TECHNOLOGY

CFIC®

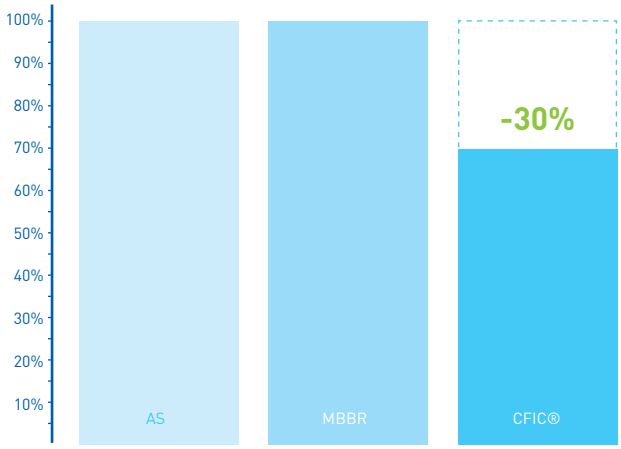
Continuous Flow Intermittent Cleaning

Wastewater treatment with Biological Turbo

The Next Generation in Biofilm Technology

CFIC® vs Activated Sludge vs MBBR

CFIC® ENERGY CONSUMPTION

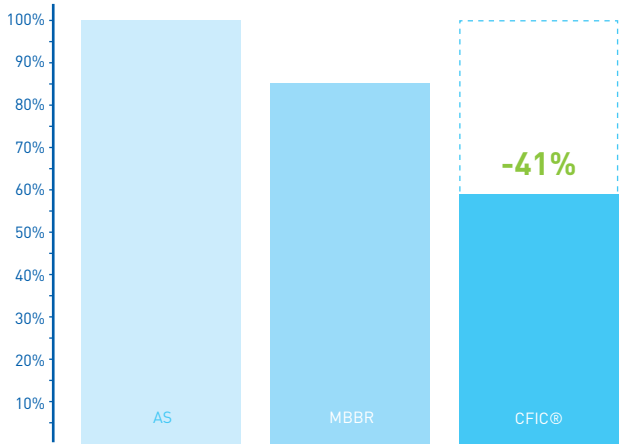


A higher oxygen transfer rate, due to a longer lifetime of the air bubbles, leads to lower energy consumption. The biological treatment stage of a WTTP accounts for 2/3 of its total power consumption.

CFIC® - The Energy Saver

- 20-30% higher surface area loading rates (SALR) than a MBBR - more treatment capacity in the same tanks
- Reduction in Energy consumption 20-30%

CAPEX

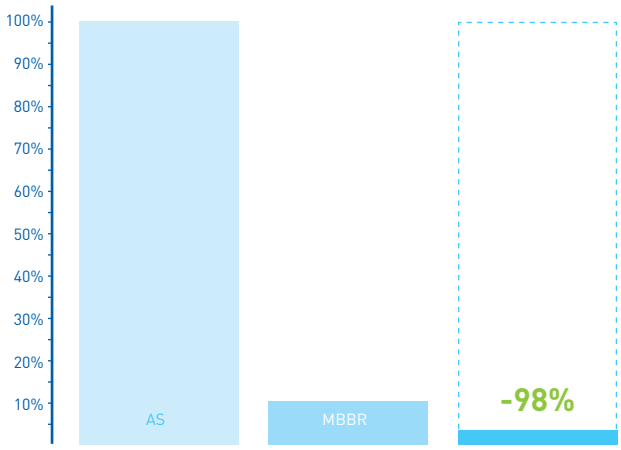


CFIC® can be integrated into existing WWTP, utilizing the existing infrastructure.

CFIC® - The CAPEX reducer

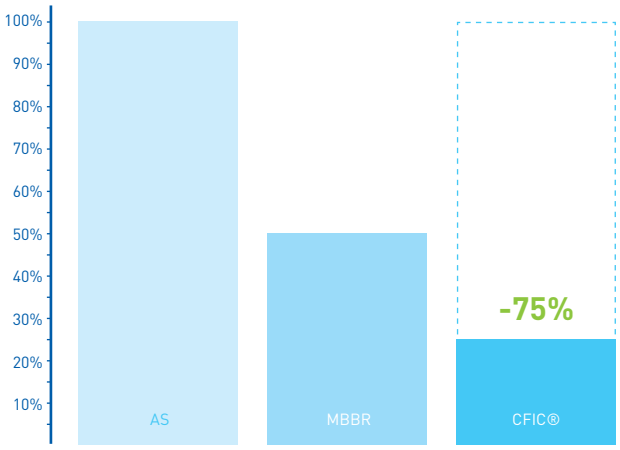
- When used with membrane, efficiency increases up to 5 times
- 20-30% less space required
- Significantly reduced need for secondary clarifier

SOLIDS IN EFFLUENT



CFIC® process lower total suspended solids (TSS) concentrations than MBBR process, even at significantly higher wastewater loading rates.

SPACE REQUIREMENTS

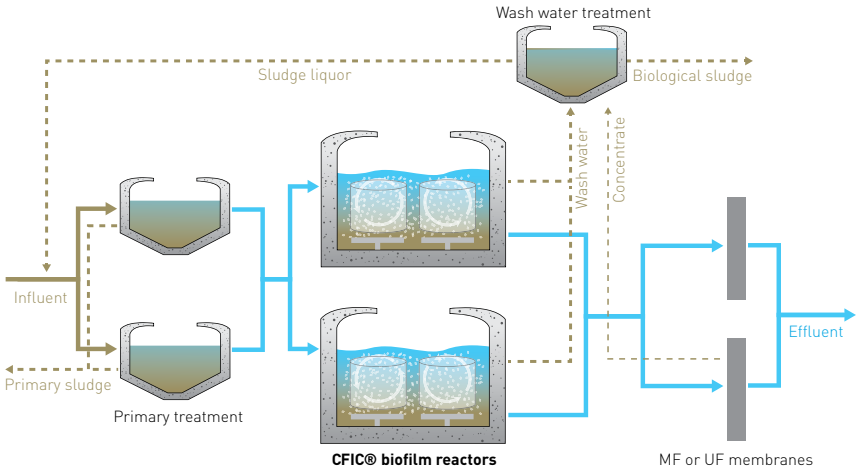


CFIC® allows 20% more compact bioreactors compared to MBBR due to its optimized process and biocarrier design.

CFIC® The Solids Controller

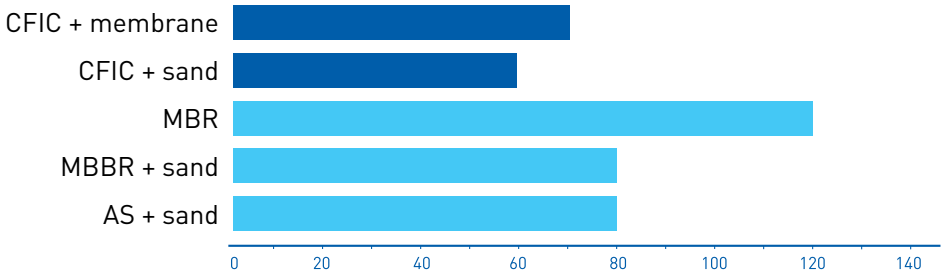
- Low effluent TSS
- Controlled wasting eliminates the need for an additional clarifier
- High volatile solids content = Renewable Energy
- Water is DIRECTLY dischargeable
- No recirculation needed
- No Chemical dosing needed

CFIC® Water Reuse Technology

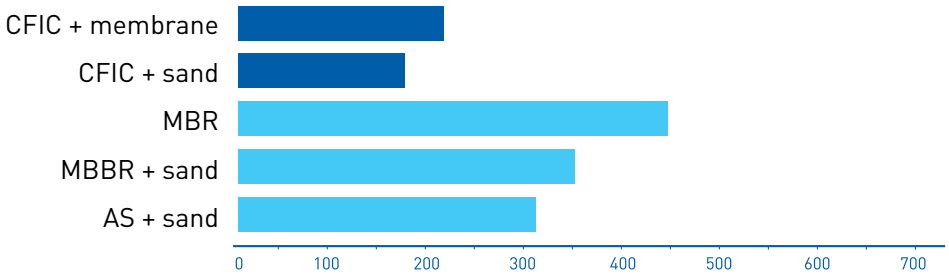


CFIC® benefits and savings

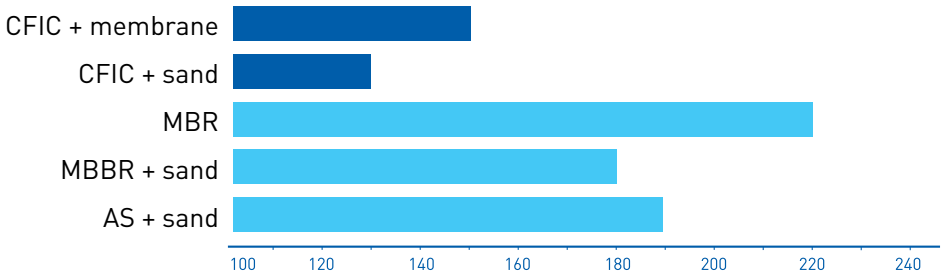
OPEX (€ PER 1000 m³)



ENERGY REQUIREMENT (kwh per 1000 m³)



CAPEX (€ PER 1000 m³)



Numbers based on 80k PE municipal wastewater treatment plant.
Results shown are reuse applications.

WATER FOR REUSE	USES
Stormwater	Recreation
Dilution water	Sprinklers
Agriculture	Flush Toilets
Industry	Fire Extinguishing
Cleaning	Air Conditioning
Landscape	Heating

Solids control increases the efficiency of membranes by 3-5 times

Low effluent TSS directly into sandfilters without secondary clarifier

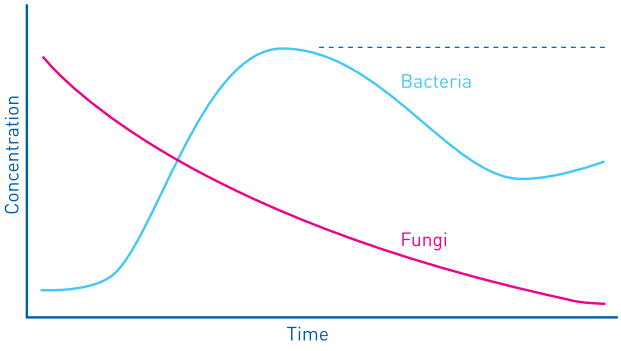
Biowater's Process Knowledge

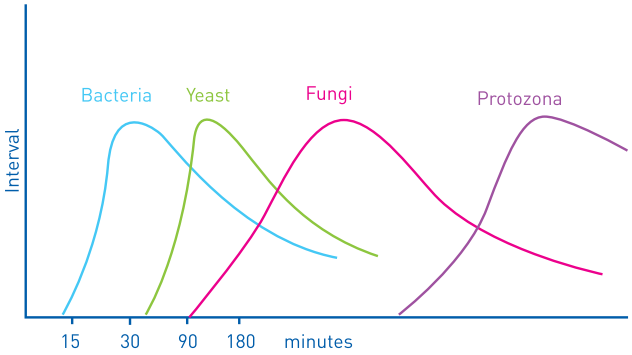
Biowater Technology is a leader in the design and development of environmentally friendly biological solutions for the treatment of water and wastewater. We have patented Norwegian fixed-film technology, the continuation of a proven business idea that was started over 20 years ago with many of the same key people.

Biowater employees are very knowledgeable with over 40 years experience most of which has been the area of fixed-film systems. We pride ourselves on our attention to detail and our knowledge of biological fixed-film design.

Wastewater treatment is carried out by many different microorganisms with a need for a variety of growth conditions

Selecting the right type and amount is key for the biological treatment stage To get optimal results different parameters must be considered





Research and development

We concentrate our effort on developing cost effective, green solutions for the future focusing on reuse of resources such as water, sludge and biogas. We are working on ways to increase production of renewable bio-energy which will be available in the near future.

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HEADQUARTERS
Biowater Technology AS
Rambergvn. 5, 3115 Tønsberg, Norway

Phone: +47 911 10 600
email: post@biowater.no

BIOWATER USA
Biowater Technology US LLC
2155 Diamond Hill Rd, Suite 2, Cumberland, RI 02864

Phone: +1 401-305-3622
email: sales@biowatertechnology.com

www.biowatertechnology.com