

# CFIC®

## BIOFILM PROCESS CONTINUOUS FLOW INTERMITTENT CLEANING

### THE NEXT GENERATION IN BIOFILM TECHNOLOGY

The CFIC®, Continuous Flow Intermittent Cleaning, is the next generation of biofilm technology. It has all of the benefits of a traditional biofilm process with moving carriers but has many additional benefits.

### ABOUT FIXED FILM TECHNOLOGY

The basis of our CFIC® biofilm technology is the biological growth on polyethylene pieces called media or carriers. These carriers provide a protective surface area for the bacteria to grow. A well developed biofilm can handle an extremely high load of nutrients while avoiding problems associated with clogging or shock.



The CFIC reactor contains highly packed biofilm carriers (typically 90-99% bulk volumetric fill) that hinders movement of the carriers that normally occurs in an MBBR reactor.

The CFIC® process is designed to increase treatment capacity while reducing footprint and overall energy costs.



### Benefits CFIC®:

*Energy Savings:  
20-30% less Than MBBR*

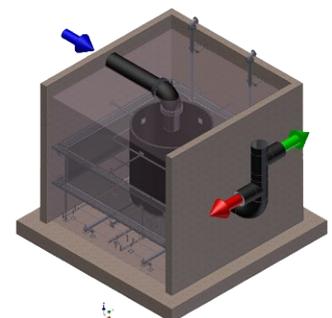
*Flexible:  
Upgrade an existing BAF, MBBR, MBR*

*Performance & Footprint:  
20-40% less Than MBBR*

*Makes solids handling less complicated*



*Bioreactor being filled with media.*



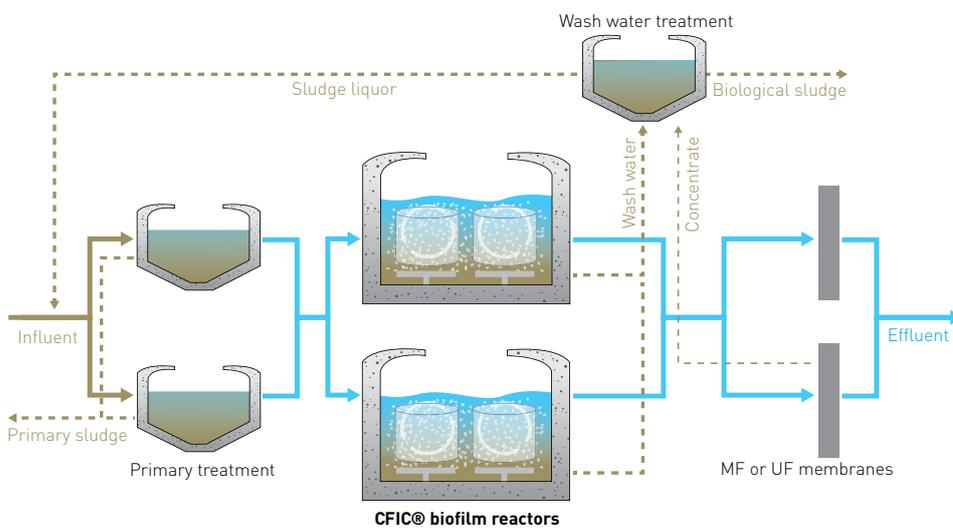
*CFIC® biofilm reactor*

**BENEFITS**

- Energy Savings - Substantial reduction in energy consumption - up to 20-30%!
- Reuse - Recycling of water and wastewater.
- Effluent Quality - Superb effluent quality.
- Low Capital Costs - Reduction in capital costs by reducing the size of the membrane or tertiary treatment.
- Flexible - Upgrade an existing SBR, MBR or MBBR to provide additional capacity.
- Performance - Improves biological treatment, which makes membranes perform more efficiently.



*CFIC® reactor contains highly packed biofilm carriers to a degree (typically 90-99% bulk volumetric fill) that little movement of the carriers occurs in the reactor during normal operation.*



**COMPLETE SYSTEM SUPPLY**

We offer systems complete with biofilm carriers, aeration, retention sieves, mixing tanks as well as any tertiary treatment or additional equipment to suit the design.

**SERVICES**

We will guide you through the process from start to finish:

- Upgrade existing plants
- Greenfield plants
- Training/education
- Consulting
- Pilot testing
- Budgetary planning
- Energy analysis

**Products from Biowater:**

**CMFF** - Complete Mix Fixed Film

**CFAS** - Combined Fixed Film Activated Sludge

**CFIC** - Continuous Flow Intermittent Cleaning

**Package Plants**

**HEADQUARTERS**

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*Biowater Technology is an innovative company with over 40 years of experience in the biological treatment field. Our focus is on saving energy and resource recovery, with water as our major resource.*