



# Cleargreen™

biological treatment of effluents with high concentrations of ammonia

## ● urban wastewater



eliminate nitrogen caused by anaerobic digestion of sludge

## ● performance and savings

economic and effective treatment of returns with loads of ammonia

## innovation

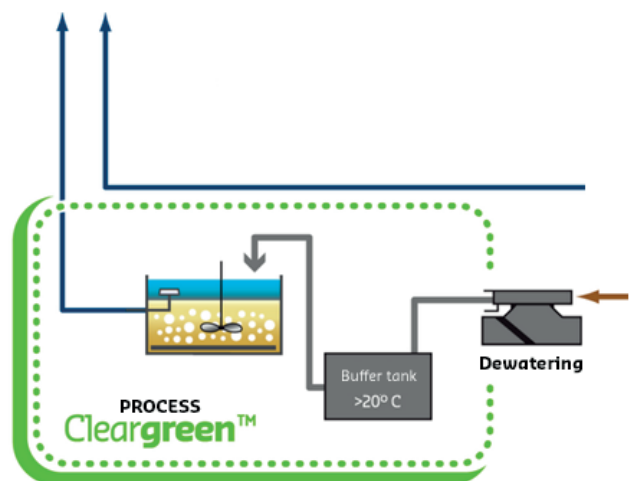
deammonification allows the treatment of concentrated ammonia caused by anaerobic digestion of sludge at the head of the station – limiting the impact of digestion on the water treatment line

Cleargreen™ (for Cyclic Low Energy Ammonia Removal) augments anaerobic treatment of sludge (biological, primary, co-digestion) to remove the nitrogen overload.

## key figure

# 60%

less air needed compared to classic activated sludge treatment



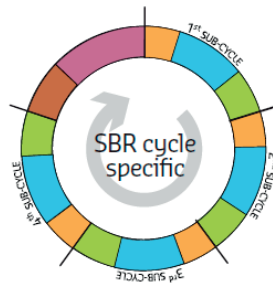
## Cleargreen™ technology . . .

Cleargreen™ is designed to work within a biological sequencing batch reactor (SBR) such as Cyclor™, a SUEZ reactor that allows the successive completion of all treatment phases in the same tank.

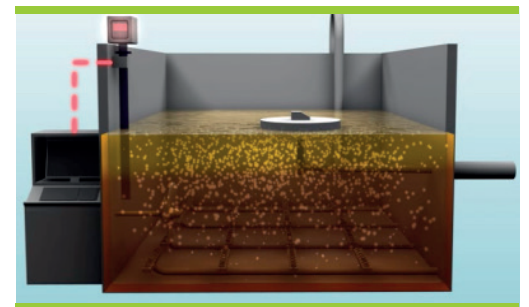
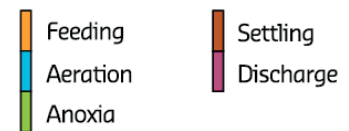
Feed, aeration and deammonification phases are divided into sub-cycles and adapt in duration and intensity according to the characteristics of the effluent to be treated. The deammonification process uses bacteria known as Anammox, naturally present in environment. Cleargreen™ does not require the addition of a biomass to function.

A specific treatment after anaerobic sludge digestion: with Cleargreen™, the flow of nitrates does not return to the head of the water treatment line, but is treated in an effective manner.

The reactor is equipped with captors, continually monitoring the system to limit human intervention



**Cleargreen™**  
CYCLIC LOW ENERGY AMMONIUM REMOVAL



## . . . what it can do for you

### flexibility of us



- process adapts depending on the quality of effluent to be treated
- automation of process controls
- robust adaptability to variations in load and effluent composition
- process that is very beneficial for plant rehabilitations



### performance

- new solution for treating return flows from digestion
- spontaneous installation of the biomass
- internally patented process

### sustainable development



- no reactive agents needed
- contributes to the preservation of energy resources
- automatic regulation of air supply = control of consumption

## among our references

**Richmond, USA**  
14-month prototype

**Creil-Montataire (60), France**  
17-month prototype

**Ourense, Spain**  
capacity: 300,000 PE