
VEOLIA

# BIOSTYR™ Duo

## Constantly evolving Biofiltration

WATER TECHNOLOGIES

# New challenges
## for local authorities

Nowadays, local authorities have to manage increasingly complex issues at stake regarding their wastewater treatment: a tense economic climate, global environmental impact constraints, and ever stricter discharge standards requiring them to treat more pollutant loads, while their facilities are already operating at full capacity and available ground is hard to come by and expensive.

**To meet these growing demands of municipal clients, Veolia Water Technologies is constantly innovating and adapting its technologies to market needs.**

In the realm of biofiltration, the Biostyr™ compact solution to eliminate carbon (COD & BOD), nitrogen ($NH_4$-N and $NO_3$-N) and Total Suspended Solids (TSS) pollution has become the leading process on its market with over 160 facilities worldwide for 25 years.

Always looking to meet new concerns while maintaining optimal treatment performance, Veolia Water Technologies has developed Biostyr Duo, a complementary solution to Biostyr.


# The Biostyr Duo solution

Biostyr Duo is a third-generation Veolia Biofilter, after Biocarbone™ and Biostyr™, which offers

- greater **flexibility** regarding the primary treatment **reducing chemical consumption**
- a **greater TSS COD and nitrogen load** in the same reactor, making it possible **to break free** from **space constraints**, whether in the context of **new construction** or for retrofit projects.
- An **increased treatment speed**, whenever raw water quality allows it, synonymous with **efficiency** and reduced operating costs.

# BIOSTYR™ Duo,
## what evolutions?

x2

Doubled in performance

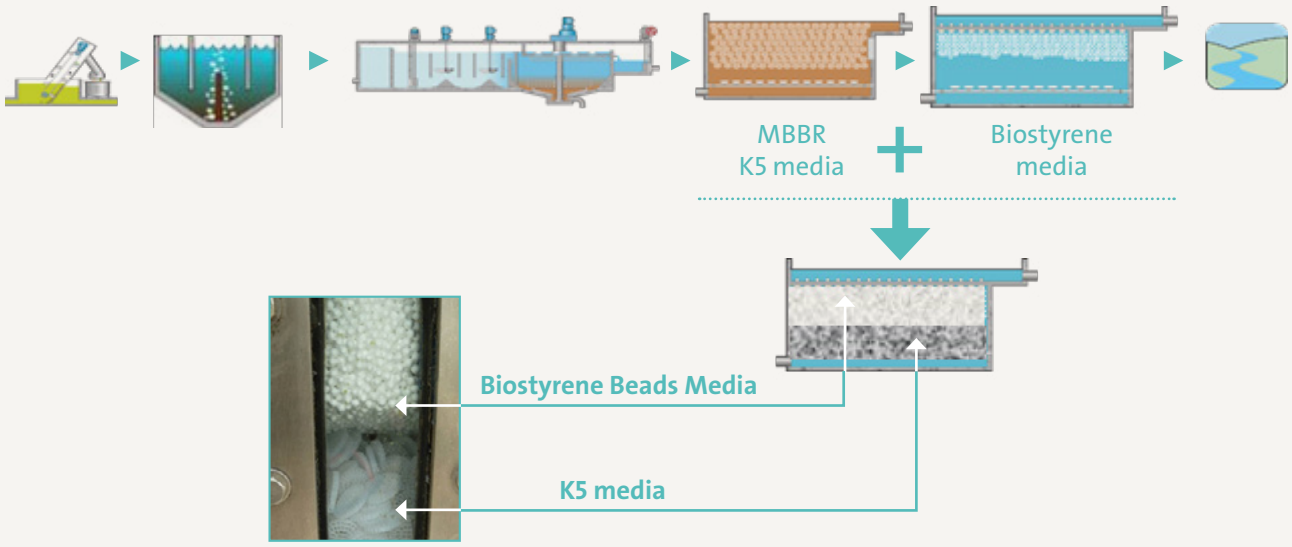
Biostyr Duo combines the assets of biofilter technology with those of the MBBR™ process based on the biofilm principle. The innovation consists in adding an already proven K5 materialin AnoxKaldnes' MBBR™ processes to the Biostyrene.

This material has a higher density than Biostyrene beads and will naturally position itself under them.

This results in an increased treatment capacity for the same reactor volume.

Accordingly, in new facilities Biostyr Duo units's footprint is significantly reduced. In existing plants, the treatment capacities of the biofiltration units can be increased without resorting to major modifications.

### The compactness of a high performance process line: the 2-in-1 Biostyr Duo solution




## Benefits

Biostyr Duo has all the advantages of its predecessor Biostyr...

> Fully **automated** operation
> **Ease** of use and maintenance
> **Low energy consumption** (due to gravity backwashing)

... and features tailored to new issues at stake

> Twofold increase in treatment **performance**
> Increased **flexibility** regarding load surges
> Reduced chemical **consumption**
> **Footprint reduced** up to 30%
> Easier **integration** into existing systems

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Compactness and performance

### References

> Cornwall (Canada)
> Cagnes-Sur-Mer (France): 160 000 EH
> Bighampton-Johnson (US): 370 000 EH

Resourcing the world

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