

# Nordic ZeroP

Nordic Water offers several products used in tertiary treatment stages proven to keep outlet phosphorus levels less than 0.1 mg/l. The products are based on efficient usage of chemical precipitation and are the most cost/energy effective and reliable method available for municipal waste water treatment plants.

- Deep-bed filtration using DynaSand filter
- Semi-cloth filtration using DynaCloth or
- Surface filtration using DynaDisc

Mechanical final processing of outflowing water from the treatment process is a highly effective way of removing any phosphorus bound to particles. To achieve extremely low phosphorus levels, the dissolved phosphorus also needs to be separated, which is done through a process of using aluminium or iron salts as precipitants. The total phosphorus output levels can then be controlled based on the metal salt dosage. Various municipal plants with requirements for low phosphorus levels often achieve total values of less than 0.05 mg/l with additional dosing.

## DynaSand

DynaSand deep-bed filtration normally offers the lowest continuous P effluent values, without using upstream flocculation tanks and use of polyelectrolytes. This process gives lowest chemical usage. The process can be combined with other processes within the same filter-bed, like nitrification, denitrification or pharmaceutical removal using granular activated carbon etc.

## DynaDisc

DynaDisc surface filtration will give you the smallest overall footprint and lowest investment costs. This system often show low P but at the same time giving extremely low wash water amount. The height of the units as well as the head-loss over the DynaDisc filters are very low which means it is easy to gravitate as a final treatment stage without excavations.

## DynaCloth

DynaCloth semi-cloth filtration combines to some extent the deep-bed & surface filtration, giving low footprint, low wash water usage and could at some sites reduce P to very low values without using polyelectrolytes. This filtration technique is particularly suitable for high inlet SS-loads or when high polymer dosages need to be applied.

	Input values	Output values
SS:	10-300 mg/l	> 5 mg/l
P-Tot:	0.2-5 mg/l	> 0.1 mg/l

