



Increase hydraulic capacity – reduced sludge escape & footprints

Achievements

Up to **100 percent higher flow** through the wastewater treatment plant without capital investment

Smaller footprint if installed in the design phase of a DB project

Minimal or no sludge escape from secondary settling tanks.

Hydroflex focuses on reduction of process volumes while increasing the hydraulic capacity.

If installed in the design phase of a DB project, the online control will reduce footprints and avoid extension of volumes.

Advantages of the Hydroflex

Proven CAPEX savings: Hydroflex will dramatically increase plant capacity. Investment in retention and settling volumes is significantly reduced and in some cases totally avoided due to **WWM Control**.

Flexibility: High process flexibility in relation to changes in the actual load compared to the design load.

Operational savings can be achieved through extension of the advanced online control system.

Protection: The environment will be protected through the increased hydraulic capacity which will minimize the combined sewer overflow (CSO) and reduce the risk of sludge escape.





Case: Czajka WWTP, Warsaw, Poland

The Czajka plant in Poland is a 2,000,000 PE wastewater treatment plant at which the **Hydroflex** was introduced during the design phase of the DB project. The plant was built in 2010 and comprises 10 parallel lines each with a **Hydroflex**. Introduction of the advanced control already in the design phase made it possible to reduce the volume of the secondary settling tanks by 15 percent. The diameter of the tanks was reduced from 52 m to 48 m, which resulted in smaller footprints and lower capital investment.

An additional benefit of **Hydroflex** was that the operating costs were reduced.

Achievements

Reduced volume of settling tanks by 15 percent

Reduced diameter of tanks from 52 m to 48 m

Smaller footprints

Lower CAPEX

Reduced operating costs

Case: Køge-Eggen WWTP, Denmark

The Køge-Eggen plant in Denmark is a 100,000 PE wastewater treatment plant with biological nutrient removal, which was challenged by frequent sludge escape from the secondary settling tanks during storm water events.

The **Hydroflex** package for upgrading of the hydraulic capacity was introduced successfully, and today, the biological step manages 100 percent more wastewater with no sludge escape.

Together with the hydraulic control package, additional **Opflex** was introduced to reduce the operating costs. The first years showed a 25 percent reduction in energy used for the biological step, and a 33 percent reduction of chemicals for precipitation. The good results were obtained by replacing the original online control system with the **WasteWater Manager-Control**.

Achievements:

Double up on hydraulic capacity

25 percent reduction in energy for biological step

33 percent reduction of chemicals for precipitation

For further information,
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