ACTIFLO® Disc

Polishing treatment for water reuse

Designed to achieve high removal levels of suspended solids and phosphorus in municipal and industrial wastewater for water reuse, Actiflo® Disc's configuration combines two efficient and compact treatment processes: an Actiflo® followed by a rotating disk filter polishing system.

This process helps to improve the treated water quality and adds a mechanical filtration screen to the physico-chemical treatment chain. This allows for the treated water to be reused for irrigation, replenishing the groundwater table or for urban use.

Thanks to its unique equipment design, this high-performing solution is applicable in several situations.

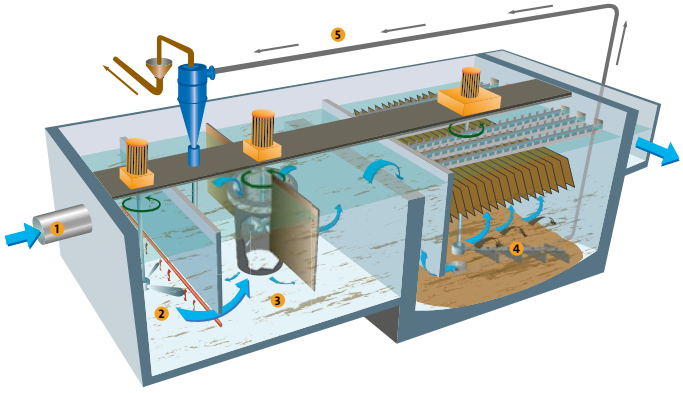
With a total removal rate in excess of 95% for phosphorus and up to more than 99% for suspended solids, Actiflo Disc's performance exceeds most discharge and reuse standards.

Used in pre-treatment upstream of the membranes, Actiflo Disc's configuration is equally suitable for producing process water and drinking water.

Operating principle

The first phase of the Actiflo Disc treatment process is a conventional Actiflo phase, namely coagulation-flocculation ballasted by microsand, which allows for high-performance clarification 60 times quicker than other conventional processes.

After the clarification, clear water is sent to the Hydrotech™ rotating disk filters for tertiary treatment. Efficient, highly flexible with a compact design, Hydrotech filters enhance the polishing process.



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= *Finally, the Actiflo Disc solution guarantees exceptional quality water production with a footprint up to 80% lower than other conventional processes.*

ACTIFLO DISC

Advantages

- Very compact solution, easy to adjust to present facilities or sites to be refurbished.
- Very low water losses: <3%.
- Provides a protective barrier against parasites (ex: Helminth eggs).
- Lower turbidity, suspended solids and reduces residual phosphate contents.
- Gravity filtration
- Continuous supply with no shutdown to wash filters.

Some references

Municipal wastewater/Reuse

› El Prat (Baix Llobregat), Barcelona, Spain, 2006, 346,000 m^3/day Tertiary treatment for reuse, aquifer recharge, irrigation, urban cleaning, salt wedge and in industry

Industry

› Camp Tarragona (Tarragona), Spain, 2010, 30,000 m^3/ day - Tertiary treatment for reuse as process water and coolant in the chemicals industry

› Hefei Binhu Beilaowei (Ph. I), China, 2014, 30 000 m^3/day
Tertiary treatment, settling velocity

› Manawatu District Council, Feilding WWTP, New Zealand, 2013, 7,500 m^3/day
Tertiary treatment of biological filtration effluents,

› TOM Prinsenland, Dinteloord, Netherlands, 2013, 2,400 m^3/day
pre-treatment of effluents and surface water upstream of an “RO”, reuse for greenhouse irrigation

Municipal potable water

› Harpeth Valley UD, Nashville, TN, USA - 90,000 m^3/day, (2015)

Industrial reuse /process water

› Bäckhammars Bruk, Kristinehamn, Sweden, 2002, 48,000 m^3/day
Treatment of river water to produce Pulp & Paper process water

› Mankato, USA, 2006, 54,000m^3/day
Tertiary treatment for reuse as boiler water at the Calpine plant

› Vale, (Inco) Goro Nickel, New Caledonia, France, 2008, 70,000 m^3/day
Polishing treatment of mine effluents for disposal in sensitive natural environments.

› Corning Japan, Japan, 2010, 500 m^3/day
Primary treatment of effluents for microelectronics sector

› Stratford Peaker Power Project , Taranaki, New Zealand, 2010, 6,000 m^3/day
River water treatment for process water production

› Philips Lumileds, Bayan Lepas (Penang), Malaysia, 2012, 800 m^3/day
Primary treatment of effluents for microelectronics sector, reuse as process water