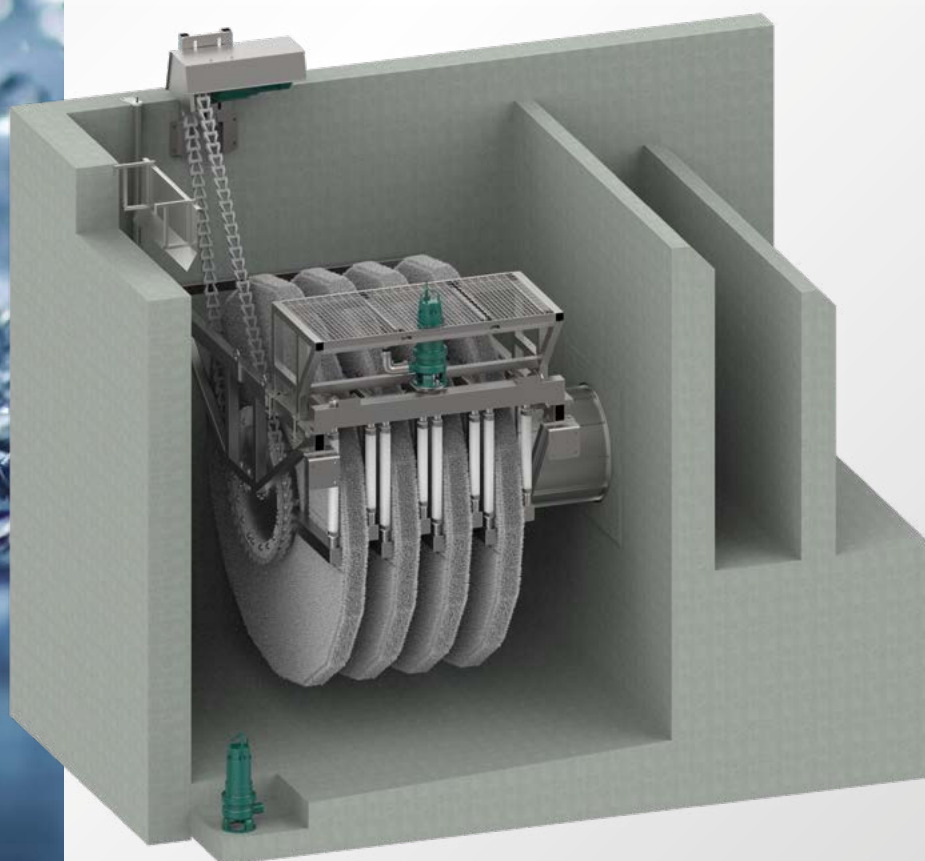




# “ORSO” PILE CLOTH FILTER

THE BEST SOLUTION,  
IF YOU THINK ABOUT  
CLEAN WATER



ALL  
FOR  
WATER

**IN-EKO**<sup>®</sup>  
TEAM

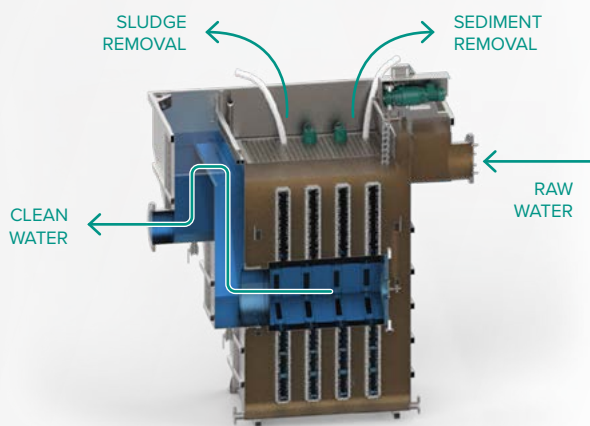
# “ORSO” FC – innovation in tertiary water treatment

IN-EKO TEAM s.r.o. has specialized in the production of wastewater treatment units since 1995. We have

used all of our knowledge and experience in filtration to enhance our filter portfolio. IN-EKO TEAM is the direct

producer of both principle devices: OUT-IN & IN-OUT.

## OUT → IN filtration principle



## Design and properties of the Pile Cloth Filter

- To ensure the highest standards in waste water treatment technology we use only **quality materials**.
- The filter cloth is available with mesh opening sizes ranging **from 5 µm equivalent**.
- 100% submerged design in combination with increased filtration surface for higher capacities.
- TSS removal, BOD and COD partial reduction, **phosphorus reduction down to 0.1 mg/l**.
- A great solution for micro-pollutant removal applications.
- The non metallic chain does not need any lubrication.
- The design of the shaft and its mounting provides an extraordinary long sealing life span.



The use certified and high quality materials guarantee long and reliable lifespan



Options of stainless steel quality: AISI304, AISI316L, AISI316Ti, Duplex alloys

## Size series

For greater variability and adaptation to the spatial and capacity needs of each project, IN-EKO TEAM has developed **a different size series of pile cloth filters**.

IN-EKO TEAM can realize a smaller compact device with a diameter of 1 m, medium sized device with a diameter of 2.2 m, and the largest sized device with a diameter of 3 m providing the biggest filtration area and capacity.

## OUT → IN system

This type of filtration comes with 100% immersed disc design involving different type of filtration cloth than used on conventional 65% immersed Disc filters.

Cleaning process involves suction instead of backwashing, so the impurities are caught from the outside in this case. Exceptional filtration results can be achieved even with the combination of “ORSO” filters with our FDi and FDGi filter series.

# How does it work?

The untreated water including its impurities flows into the filter pit. There is a filter including the filtration cloth on the segments, which forms individual discs. The entire system is 100% submerged. Water passes through the filtration cloth inside the hollow shaft retaining the impurities on its surface.

As the impurities get caught on the filter cloth, the flow decreases and the water level in the filter pit rises gradually. When the water level probe is activated, the filter discs start to rotate and initiates the cleaning process. This process involves slow rotation and suction of the impurities.

As the water level decreases to the pre-set minimum water level and the backwash cycle ends, the unit stops rotating and filtration returns to its maximum capacity at minimum level. The filtration cycle repeats. **Filtration goes on continually without interruption.**

## FC2 / FCi (intensified compact version)

- Disc diameter 2.2 m
- Up to 32 discs
- Ideal for medium to large applications

We can also supply two special & tailor-made versions with 1 metre diameter and even 3 metre diameter discs. They are only made-to-order versions to support our partners with customized versions to suite projects' needs.



## Technical advantages of “ORSO” FC Filters

- Continuous filtration even during the backwash
- High capacities on small footprint (100% submerged)
- Higher filtration area per disc
- Lower power consumption during backwash
- Low operational cost
- Possibility of sedimentation in the filter pit
- No aerosol pollution during backwash cycle
- Exceptionally low noise pollution
- Long life span of filtration cloth – no risk of tearing the cloth
- 2.2 m diameter with 1 m<sup>2</sup> more of filtration surface area, than was available until today on the market
- Compact footprint (low space requirement) with two options: FCi (intensified) & FCis (compact tailor made)

## Applications

- Treatment of effluent water
- Pre-treatment before UV
- Pre-treatment of potable water
- Aquaculture
- Pulp and Paper industry
- Cooling water in various industries
- Inlet process water
- Food processing
- Recovery of valuable materials in different types of industry

# ✓ The right choice

For the right filter size it is necessary to take into consideration the maximum influent hydraulic flow (Qmax), the expected loading and particle size of suspended solids (SS), and then mesh size in combination with surface loading to achieve the best effluent water quality.

Optimal operation of multiple filters can be managed in parallel by a PLC or other computerized system.

The Pile Cloth filter can be supplied in a concrete channel version or steel tank version. We also offer different optional accessories to “ORSO” filters

such as covers, organ pipe emergency overflow, remote monitoring modul and service platform.

## + Benefits for customers

- Higher quality of effluent water
- A great solution for industrial applications
- Gravity flow saves energy costs
- **Exceptionally low power consumption**
- Filters can be adjusted to suit customer's needs/project
- Highest level of factory configuration and assembly to minimize installation costs onsite and maintain the highest quality control
- Possibility of combining with IN-OUT Disc filters at two-stage filtration systems
- Low maintenance costs
- The unit can be put into operation immediately after its installation
- Better resistance to handle the influent disbalances/peaks
- High resistance to withstand shock loads

More information about our pile cloth filters, microscreen drum filters and other units from our complete product line of pre-treatment and microfiltration of waste water can be found at [www.in-eko.com](http://www.in-eko.com).

You can contact us by phone, email or in person.



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