

Taron™ Activated Sludge Filter

MEET EFFLUENT REQUIREMENTS UNDER HIGHER FLOW RATES

Features and benefits

- Relieves hydraulic and suspended solids load on existing secondary clarifiers
- Expands treatment plant capacity without requiring new concrete infrastructure
- Up to 60% smaller footprint than traditional secondary clarifiers
- Typical filtrate TSS is less than 10 mg/L
- Power consumption is less than 0.1 kWh/m³
- Easy stand-by operation provides resilience to varying hydraulic loads
- Operational simplicity reduces training and maintenance requirements
- Flexible installation options to fit within the existing plant infrastructure
- Available for retrofit, rental, and greenfield construction

The Taron activated sludge filter performs the function of a traditional secondary clarifier in a compact footprint, allowing municipal and industrial wastewater treatment plants to expand biological treatment capacity and meet their effluent targets.

How it works

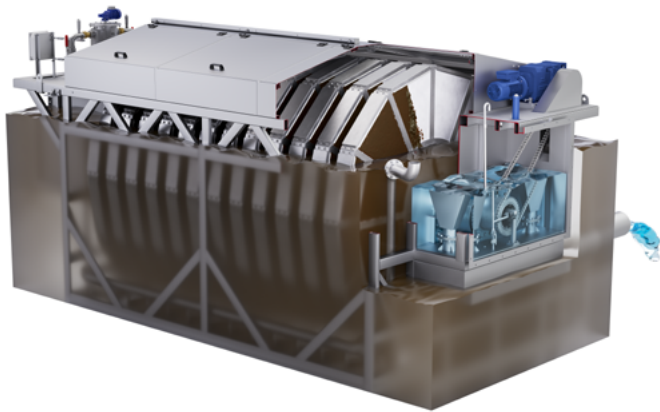
The Taron filter develops a dynamic sludge cake layer on micro mesh panels to remove solids from the mixed liquor. Vertical discs are mounted on a hollow shaft and submerged in the activated sludge. As the discs rotate and liquid flows through the panels, activated sludge is deposited on the mesh. Hydraulic pressure then compacts the biomass and forms the sludge cake layer. Filtrate flow is controlled by the rotational speed of the discs and a continuous filtrate backwash system that removes the sludge cake layer after each rotation.

Typical applications

- Filtration of activated sludge
- Removal of mixed liquor suspended solids (MLSS)
- Activated sludge thickening



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Scope of supply

- Rotating discs with polyester mesh panels
- Backwash system with low-pressure spray nozzles inside the discs
- Integrated tube aerators
- Chain drive system
- Filter frame and mounting brackets
- Filtrate removal system

Additional options available in engineered-to-order Taron filtration systems

- Filtration tank
- Sludge pumps
- Supplementary aeration system
- Chemical dosing system
- Filtrate and sludge sensors
- Control cabinet and software
- Xylem Avensor module for remote connectivity

Technical data

Filter specifications

Filtration type	Outside-in
Number of discs	2 to 12
Disc diameter	2.2 m
Typical flowrate	Up to 80 m ³ /h
Filter weight	1 900 to 3 780 kg
Filter length	2 150 to 4 820 mm
Filter width	2 236 mm
Filter height	2 534 mm
Material standards available	304 Stainless Steel 316 Stainless Steel

Typical application requirements

Liquid temperature	10-35°C
Feed	Aerobic activated sludge
MLSS	4 000 to 12 000 mg/L
Total sludge age	8 to 25 days
Sludge Volume Index (SVI)	< 150 mL/g

Electrical component data

Protection class	IP55
Connected load	1.5 to 4.6 kW
Full load current	16 A
Voltage	400 V
Frequency	50 Hz
Power supply system	TN-S NET
Motor class standard	IE3

Standards and certifications

Standards	EN60204 / EN61439-1
Certification	CE

Work with the treatment experts

Plant flow rates, biological treatment performance, and sludge quality all influence Taron activated sludge filter sizing and operation. Activated sludge with good filterability allows high filtrate flows and good effluent quality with the Taron filter process.

Xylem's team of biological and filtration treatment experts can determine the Taron filter's suitability, optimize the filter system design, and support integration into existing wastewater treatment plant infrastructure to achieve customer requirements.