

Metso

The right water at the right place

Water Treatment Skids



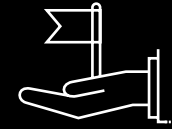
Metso
PLUS

Improve water quality and enable water recirculation in concentrator plants

Efficient and effective water treatment solutions

The Water Treatment Skids offer efficient and reliable water treatment for industrial settings, using centrifugal separation and self-cleaning filtration to remove particles and solids. With automated controls and a compact, modular design, these skids provide plug-and-play installation with essential connections for inlet dirty water, outlet clean water, solids disposal, electricity, and instrument air. The compact and modular design allows for flexible installation and scalability, while automated cleaning mechanisms minimize maintenance downtime, ensuring reliable operation.

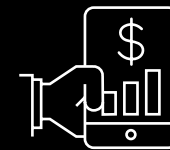
The WTS addresses the critical need for efficient and effective water treatment solutions, mainly targeted for thickener overflow treatments from solids in order to locally and efficiently close the clean water supply needs of the dewatering areas. These WTS could also be installed in other process water streams cleaning and other areas of the plants, to enable safe and beneficial water reuse. Overall, the Water Treatment Skids provide customers with a turnkey solution that combines efficiency, reliability, and ease of use in water treatment processes.



Improve quality
and recirculation



Superior scalability



Conserve resources

Environmental benefits

Water conservation: Reusing treated water for industrial purposes conserves water and reduces freshwater demand.

Pollution reduction: Removing coarse particles and fine solids from water reduces pollution and improves environmental impact.

Energy efficiency: Using advanced technologies like self-cleaning filters and centrifugal separators optimizes water treatment and energy consumption.

Resource preservation: Effective water treatment extends equipment lifespan, reducing the need for premature replacement and disposal.

Social benefits

Public health and safety: Ensuring high-quality water for industrial processes protects public health by reducing contamination risks.

Community engagement: The project may create jobs and boost local economies through manufacturing, installation, and maintenance of Water Treatment Skids.

Access to clean water: Promoting water reuse and treatment helps improve access to clean water, especially in areas with scarcity or contamination.

Economic benefits

Cost savings: Implementing WTS can save costs by reducing water use, minimizing maintenance downtime, and optimizing efficiency.

Market competitiveness: Using WTS for sustainable water management can give industrial facilities a competitive edge by boosting environmental credentials and meeting regulations.

Long-term investment: Investing in WTS boosts operational resilience and reduces financial risks from water disruptions and compliance issues.



Process overview

The base process and technical solution used to provide the basic functionality of the Water Treatment Skids involve a multi-stage water treatment approach, combining centrifugal separation and self-cleaning filtration technologies.

Centrifugal separation

The first stage of the process involves centrifugal separation, where the water stream is subjected to high centrifugal forces within a centrifugal separator. This force causes denser particles and solids suspended in the water to migrate outward and settle along the walls of the separator, while the clean water continues to flow through the center.

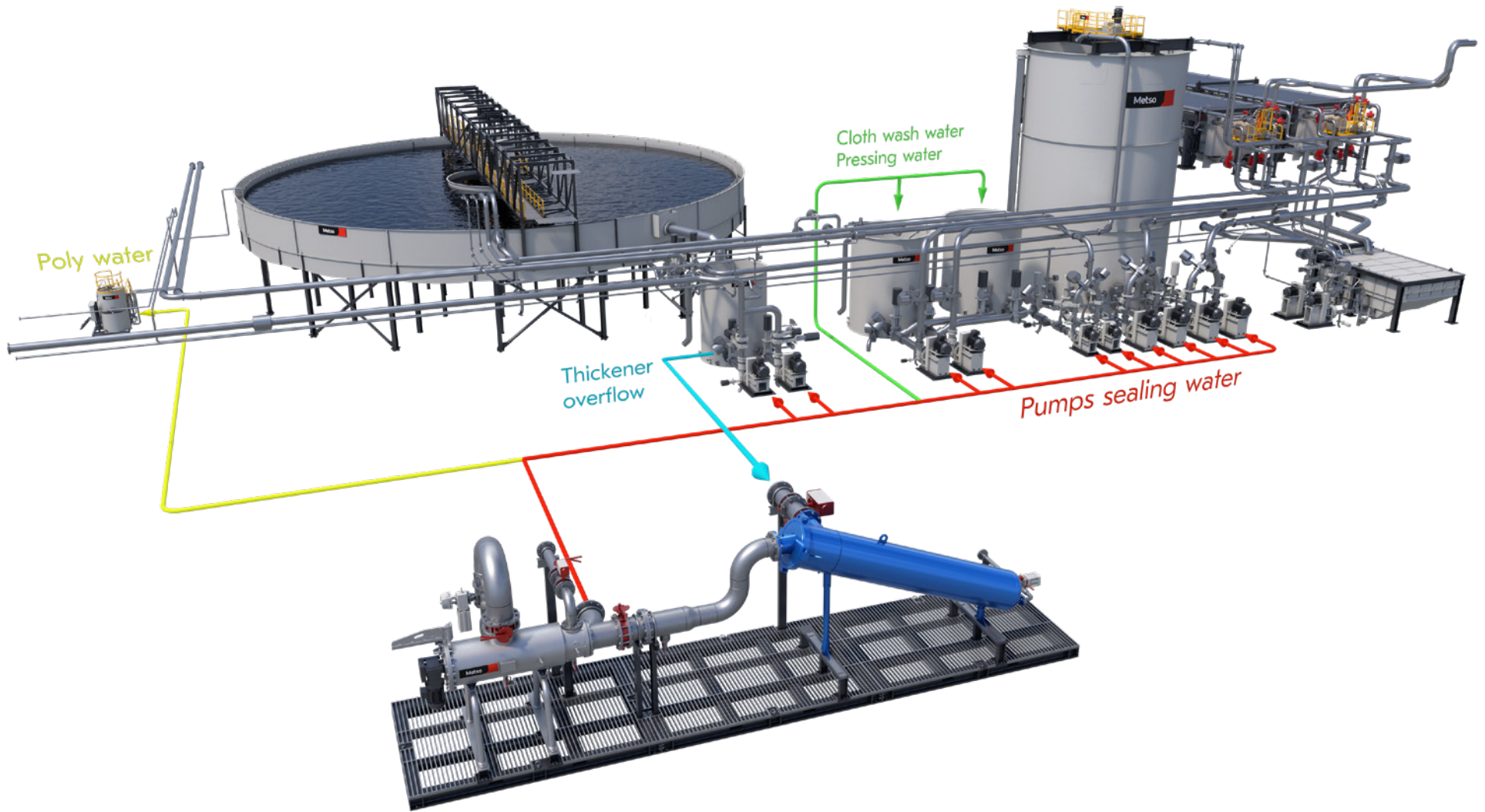
Self-cleaning filtration

Following centrifugal separation, the water undergoes further treatment through self-cleaning filtration systems. These filtration units consist of specialized filter media designed to capture fine particles and impurities present in the water. As water passes through the filter media, suspended solids are trapped, allowing only clean water to pass through.

Automated Cleaning Mechanisms

To maintain optimal filtration efficiency, the self-cleaning filters are equipped with automated cleaning mechanisms. These mechanisms, which include backwashing and mechanical scraping, periodically remove accumulated solids from the filter media, when the certain pressure difference is reached, ensuring continuous filtration performance without the need for manual intervention.

By integrating centrifugal separation and self-cleaning filtration technologies into a compact and modular skid design, the Water Treatment Skids provide an efficient and reliable solution for removing contaminants and solids from water streams in industrial applications. The base process and technical solution employed by the skids ensure high-quality water output, reduced maintenance requirements, and enhanced operational efficiency, meeting the diverse needs of industrial customers for water treatment and purification.





Unmatched value with tailored features

Significant cost savings

By implementing the Water Treatment Skids, significant cost savings can be achieved through reduced fresh water consumption, lower energy consumption, and minimized downtime associated with maintenance and system failures. These cost savings contribute directly to improved profitability and operational efficiency. Additionally, the skids ensure compliance with stringent environmental regulations and standards governing water quality and discharge, mitigating the risk of fines, penalties, and reputational damage associated with noncompliance.

Enhanced efficiency and process reliability

The Water Treatment Skids streamline water treatment processes, improving operational efficiency and throughput while reducing labor requirements and manual intervention. This results in optimized production

schedules and resource utilization, maximizing overall operational performance. With advanced automation and real-time monitoring capabilities, operations teams can maintain consistent water quality and system performance, minimizing the risk of process disruptions and ensuring uninterrupted production.

Simplified maintenance with reduced downtime

The skids' self-cleaning filtration systems and predictive maintenance features minimize downtime by proactively identifying and addressing potential issues before they escalate. This reduces unplanned maintenance activities, extends equipment lifespan, and enhances overall system reliability. Easy access to spare parts, interfaces, and comprehensive maintenance support services simplifies routine maintenance tasks, reducing the burden on maintenance teams and optimizing workforce productivity.

User-friendly and safe

Intuitive controls, user-friendly interfaces and easily accessible parts of the skid make operating the Water Treatment Skids straightforward and hassle-free, minimizing training requirements and ensuring rapid adoption by end-users. The skids' modular design and configurable platform allow for tailored solutions that meet specific requirements and project specifications. Advanced safety features and protocols built into the skids enhance workplace safety for users, reducing the risk of accidents and injuries associated with manual water treatment processes.

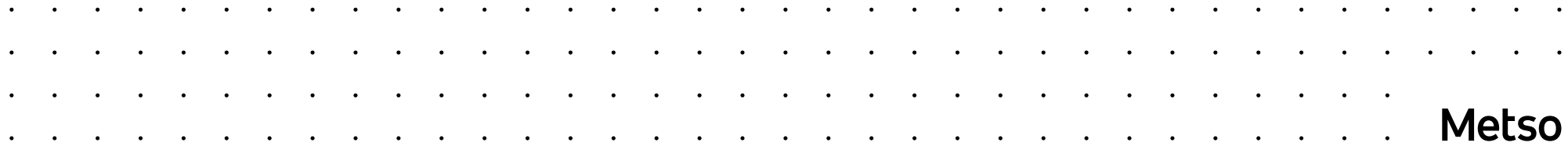
Wide range of series available

7 m³/h to 490 m³/h feed water flowrate

Model	WTS-10	WTS-50	WTS-120	WTS-180	CWTS-490
Feed Flowrate (m ³ /h)	7 - 10	30 - 51	65 - 120	102 - 187	265 - 490
Feed Pressure (bar)	min 3.5, max 6.5	min 3.5, max 6.5	min 3.5, max 6.5	min 3.5, max 6.5	min 3.5, max 6.5
Feed Solids Content (volume)	max 1% vol	max 1% vol	max 1% vol	max 1% vol	max 1% vol
Feed Particle Size (microns max)	9,000	9,000	9,000	9,000	9,000
Feed Inlet	DN50	DN100	DN150	DN150	DN200
Separator Reject Outlet	DN40	DN40	DN40	DN40	DN40
Self-Cleaning Reject Outlet	DN25	DN80	DN80	DN80	DN100
Treated Water Outlet	DN50	DN80	DN200	DN200	DN250
Treated Water Solids Content (mg/l)	5 - 50	5 - 50	5 - 50	5 - 50	5 - 50
Treated Water Particle Size (microns max)	1 - 200	1 - 200	1 - 200	1 - 200	1 - 200
Voltage and Power Requirements	240V 1ph 50Hz, 0,1kW	400V 3ph 50 Hz, 1,1 kW	400V 3ph 50 Hz, 0,75 kW	400V 3ph 50 Hz, 0,75 kW	400V 3ph 50 Hz, 1,1 kW
Pressurized Air Requirements (bar)	min 6 bar	min 4 bar	min 4 bar	min 4 bar	min 4 bar
Dimensions LxWxH (mm)	2,700x1,800x2,400	2,700x1,800x2,300	5,400x1,800x2,300	5,400x1,800x2,500	8,100x1,800x2,500
Empty weight (kg)	1,000	1,300	2,400	3,000	3,850
Shipping container	1 pcs 10'	1 pcs 10'	1 pcs 20'	1 pc 20'	1 pcs 40'

Metso is a frontrunner in sustainable technologies, end-to-end solutions and services for the aggregates, minerals processing and metals refining industries globally. We improve our customers' energy and water efficiency, increase their productivity, and reduce environmental risks with our product and service expertise. We are the **partner for positive change**.

metso.com



Metso