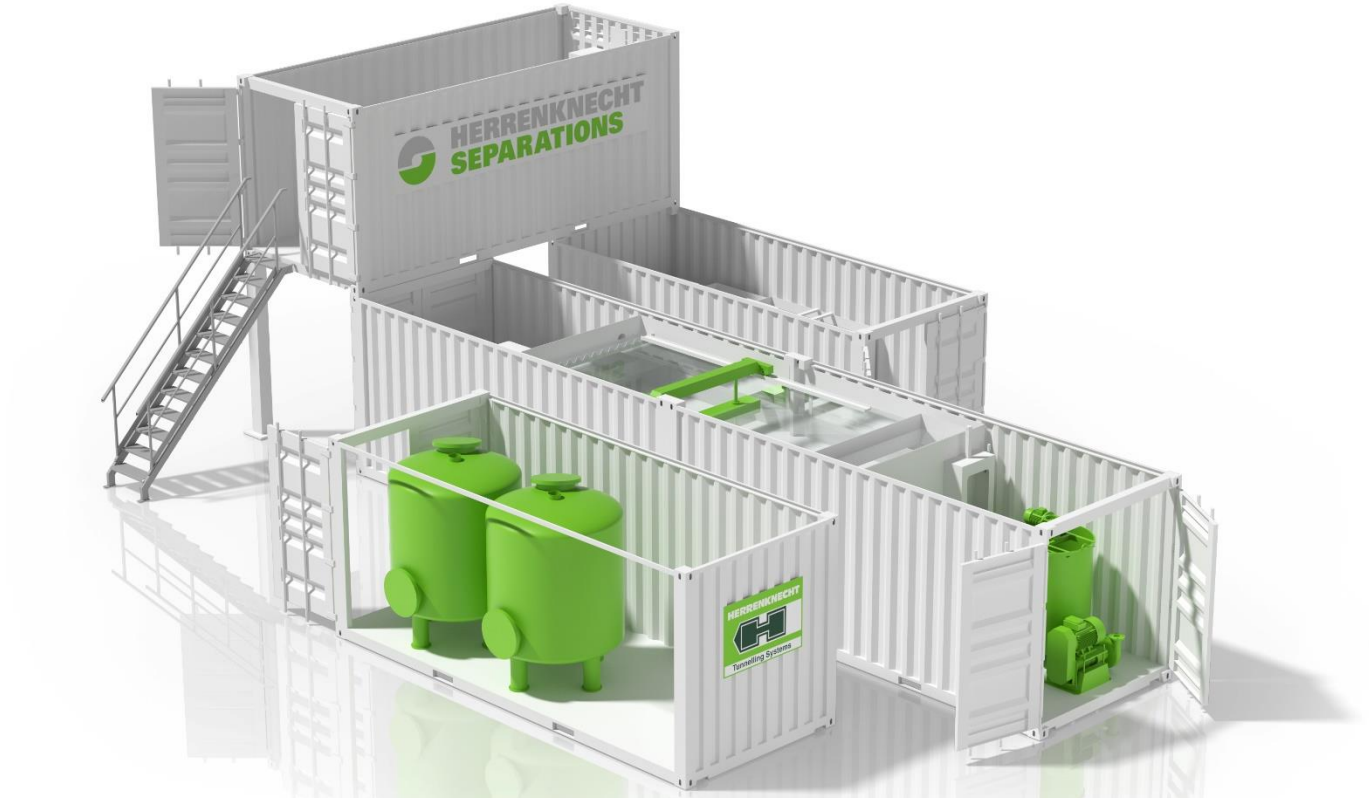
HERRENKNECHT SEPARATIONS

Fraccaroli & Balzan
Water Filtration Systems

CONTAINERIZED WATER TREATMENT PLANTS FOR TUNNELLING AND MINING



As part of any city or country's water legislation, water coming from construction sites must meet certain requirements before being discharged into the sewer system or returned to the natural environment. To meet these requirements, Herrenknecht has developed modular, containerized and pre-assembled Water Treatment Plants (HK WTP) that enable construction sites to comply with these applicable regulations. These systems are easy to transport, install, operate and expand (if required).

Importance of water treatment

- Increasing requirements and limitations for environmental protection and sustainability
- Increasing disposal costs
- Avoiding jobsite limitations
- Limited space on construction sites
- All-in-one solutions

Advantages of HK WTP

- Modular design, individually expandable
- Flexible flow rate for all sizes of water circuits
- Several options to meet specific compliances
- Fast and easy assembly and commissioning
- Integration into TBM and STP controls
- Data management and remote access via HK.CONNECTED
- High-quality and reliable components

Herrenknecht Water Treatment Plants
Technical specifications

- Fully containerized (20 or 40 ft)
- Expandable according to flow rates
- Adaptable to all requirements
- PLC controlled and fully automatic
- Low maintenance and service friendly

Basic items

- Incoming and outgoing tank with chemical dosing
- Linear thickener and flocculant station
- Filter press

Optional items

- Quartzite sand filter for TSS < 100 mg/l
- Activated carbon filters for organics
- Additional chemical dosing pumps
- pH treatment with CO2 instead of acid
- WTP.ON data management module

Adaptable to all requirements

Type	Flow rate (in m³/h)	Footprint (in m²)	Container sizes (approx.)
HK WTP 10	≤ 10 m³/h	35 - 45 m²	Container 1 (buffer tank & thickener): 20 ft Container 2 (filter press): 20 ft
HK WTP 20	≤ 20 m³/h	45 - 85 m²	Container 1 (buffer tank): 20 ft Container 2 (thickener): 20 ft Container 3 (filter press): 20 ft
HK WTP 40	≤ 40 m³/h	60 - 100 m²	Container 1 (buffer tank): 20 ft Container 2 (thickener): 40 ft Container 3 (filter press): 20 ft
HK WTP 60	≤ 60 m³/h	70 - 135 m²	Container 1 (buffer tank): 20 ft Container 2 (thickener): 40 ft Container 3 (filter press): 40 ft
HK WTP 80	≤ 80 m³/h	100 - 165 m²	Container 1 (buffer tank): 40 ft Container 2 (thickener): 40 ft Container 3 (filter press): 40 ft
HK WTP 120	≤ 120 m³/h	130 - 185 m²	Container 1 (buffer tank): 40 ft Container 2 (thickener): 40 ft Container 3 (filter press): 40 ft

Incoming parameters to know

- Excavation method and types of water
- Footprint available
- TSS (solid content) in g/l
- Capacity peaks
- pH value
- Surfactants
- Mineral oil and hydrocarbons
- Chrome and other heavy metals
- Pollutants and organics

Outgoing parameters to know

- Specific limitations
- TSS (solid content) in mg/l
- Target pH value
- Reuse of the water
- Discharge conditions
- etc.

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All dimensions and data refer to customizable basic product features.

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HERRENKNECHT Tunnelling Systems

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