

# SEPARATION PLANTS



Herrenknecht Separation Plants (HKS) are used in fluid-assisted tunnelling for the primary separation of solids from the suspension (also known as “slurry”). They are multi-stage, modular, containerized and pre-assembled for easy handling, fast installation and commissioning. Efficient and reliable components, specifically designed according to the geological requirements and to the maximum excavation parameters, guarantee safe and trouble-free operation under optimal disposal conditions. This ensures that the separation process does not become a bottleneck in the tunnelling process.

## Importance of separation on jobsites

- › Purification and recycling of suspension for safe operation
- › Key performance factor for TBMs
- › Extension of the suspension lifetime
- › Classification by size
- › Optimized disposal costs
- › Efficient recovery and reuse of water
- › Proven and reliable technology

## Advantages of HKS

- › Suitable for high solid loads and volume flows
- › Different capacities and sizes available
- › Modular expandable if necessary
- › Easy handling due to container design (-CC)
- › Compact for low space requirements
- › Fast assembly and disassembly
- › High quality components ensure low maintenance and operating costs
- › Easy to refurbish and reuse

# Herrenknecht Separation Plants

## Technical specifications

- › Level 4: Hydrocyclones, drum screen machine
- › Level 3: Coarse screen machine, dewatering screen machine
- › Level 2: Buffer tanks
- › Level 1: Active tanks, pumps



### Basic items

- › Active, balance and collecting tanks
- › Switch and control cabinets
- › Coarse screen machines for scalping
- › Dewatering screen machines for desanding
- › Hydrocyclone stages for desilting
- › Cyclone feed pumps
- › Ventilation system
- › Sandwich panel housing
- › Pipelining with fast couplings

### Optional items

- › Control room and laboratory
- › Drum screen upgrade to avoid clogging
- › Noise and Vibration Cancelling System (NVCS)
- › Density regulation system for ultra-fines
- › STP.ON module for HK.CONNECTED data management system
- › Further peripheral components to complete the jobsite

### Technical details approx.

		1-Block (HKS 500 - 1200)	2-Block (HKS 800 - 1500)	3-Block (HKS 1500 - 3000**)
Max. inlet flow	m³/h	500 - 1200	800 - 1500	1500 - 3000
Max. discharged solids	t/h	100 - 300	300 - 450	450 - 1000
Mesh size coarse screens	mm	12 / 3.1	12 / 3.1	12 / 3.1
Mesh size dewatering screens	mm	0.5 / 0.5	0.5 / 0.5	0.5 / 0.5
Cutpoint D <sub>50</sub> coarse cyclones (15")*	µm	75 - 90	75 - 90	75 - 90
Cutpoint D <sub>50</sub> fine cyclones (6")*	µm	25 - 35	25 - 35	25 - 35
Screen underflow tank	No	1	2	3
Active tank volume approx.	m³	50 / 100	100	150
Total installed power approx.	kW	150 - 450	400 - 850	850 - 1200
Dimensions approx.	LxWxH	12 x 5 x 9 m	12 x 9 x 12 m	12 x 12 x 12 m

\* Liquid Viscosity = 1.0 cPs

\*\* higher volumes are possible depending on TBM diameter or requirements



### HERRENKNECHT AG

77963 Schwanau  
Germany  
Phone +49 7824 302-0  
Fax +49 7824 302-3403  
separations@herrenknecht.com  
www.herrenknecht.com

