

TUNNELLING FILTER PRESSES



Filter presses are used for secondary treatment in the passive circuit to separate solids from the discharged suspension and thus minimize disposal costs. To meet the requirements of today's tunnelling jobsites, Herrenknecht has developed a new and unique Tunnelling Filter Press (HKFP). It can be used in combination or as an alternative to centrifuges - depending on the location, geology and requirements. Thanks to its modular and fully containerized design, the HKFP can be assembled and commissioned without extensive concrete work and requires significantly less space compared to other setups. This gives customers maximum efficiency and flexibility on construction sites.

Importance of filter presses

- › Extension of slurry lifetime
- › Performance factor for TBMs
- › Separation of ultra-fine particles from the suspension for good disposal conditions
- › Low residual water content of discharged solids
- › Proven technology
- › High filtrate water quality for easy processing
- › Applicable for various industries

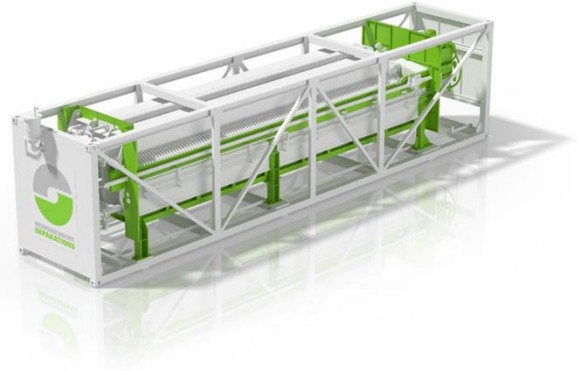
Advantages of HKFP

- › Container-cased design
- › Modular & expandable
- › Tunnelling application with lime and polymer
- › Membrane operation for lowest water content
- › Full set-up with all required peripherals
- › No extensive concrete works or industrial shed required
- › Fast assembly & disassembly
- › Low maintenance & operation cost
- › Integration into HK.CONNECTED data management system

Herrenknecht Tunnelling Filter Presses

Technical specifications

- › Containerized 40 ft.
- › Filtration area approx. 320 m²
- › Discharge capacity dry solids max.* 8-10 t/h
- › Plate size 1.5 x 1.5 m
- › Membrane plates 95 No
- › Chamber (cake) thickness 30 mm
- › Low residual moisture of discharged solids
- › Up to three filter presses in row possible



* depending on geology, properties of the feed suspension like viscosity and density, polymers, coagulants, flocculants
* in operation with Density Regulation System (DRS), the solids discharge will increase by approx. 10-20%

Basic items

- › Filter press
- › Feeding and filtrates treatment equipment
- › pH treatment equipment for filtrates
- › Membrane squeezing equipment
- › Switch cabinet with control touch panel
- › Safety systems
- › Clothes and underclothes
- › Core blow system
- › Lime and/or polyamine operation design

Optional items

- › Combinations with centrifuges
- › Lime silo
- › Chain conveyors for front discharge
- › Automatic cloth washing system

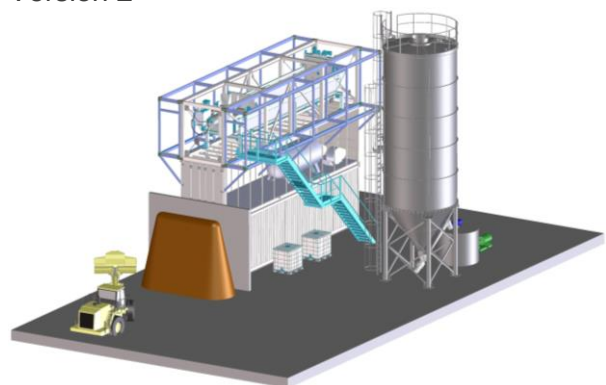
Full container design with two jobsite installation versions

Version 1



- › Up to three filter presses for max. capacities

Version 2



- › Filter press connected to a scraper conveyor for small footprints