

OPERATION

Efficient separation plants are the basis for the successful use of bentonite suspensions in microtunneling and foundation engineering. The task of the separation technology is to separate the slurry from the solid components such as gravel, sand, clay and silt and to return the recycled bentonite to the conveying circuit. Optimum separation and dewatering technology minimizes disposal costs and increases economic efficiency.

Process step 1

The process medium is fed to the lower deck of the double-deck screening machine, where coarse separation takes place in the first step. Larger particles are conveyed to the screener discharge and thus out of the circuit. Smaller particles are collected with the slurry in an underflow sump.

Process step 2

The first pump stage (connected to the underflow sump) directs the slurry into the first cyclone stage. Here, a separation occurs into the underflow and overflow. The underflow is taken to the upper level of the screening machine for dewatering, while the overflow is directed to a distinct second chamber within the underflow sump.

Process step 3

The second pump stage (connected to the second chamber in the underflow sump) directs the slurry into the second cyclone stage. Here, a fine separation into underflow and overflow takes place. While the underflow is directed to the upper deck of the screening machine for dewatering, the overflow is channeled into a separate third chamber within the underflow sump. From this chamber, the recycled bentonite runs into the storage tank for recycled slurry below.

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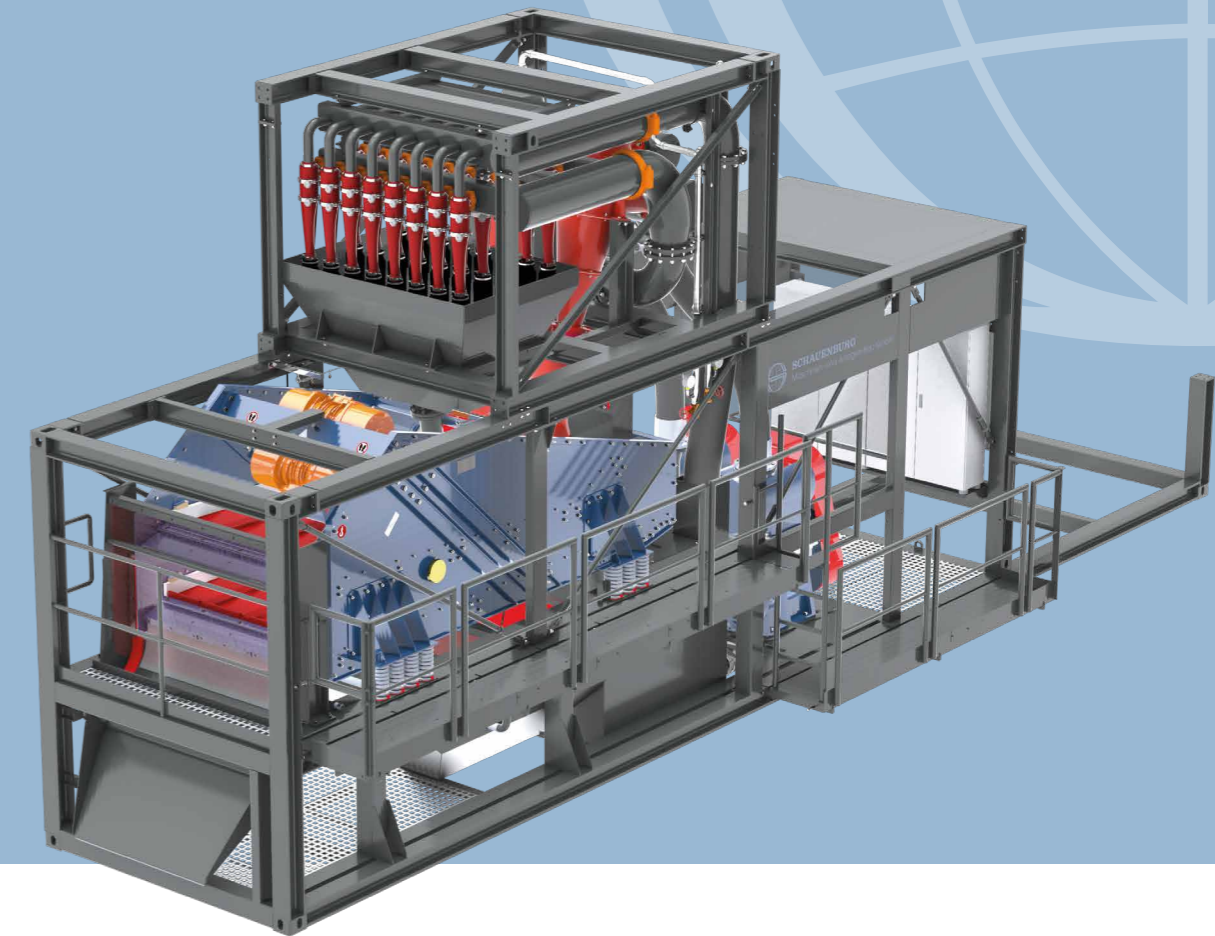
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SEPARATION PLANT MAB 500 C-100



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SEPARATION PLANT MAB 500 C-100

This compact but high-performance separation system has been designed to recycle the slurry as completely as possible, so that it can be used in the slurry cycle for as long as possible, saving on disposal costs and costs for additives. Both cyclone stages are equipped with MAB cyclones, which guarantee excellent separation cut points. The plant design ensures that 100% of the slurry is recycled successively in both cyclone stages in each cycle.

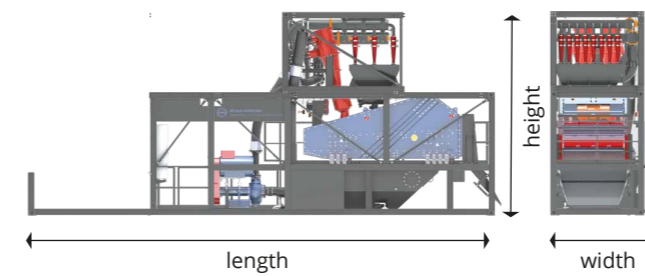


Hydrocyclone
AT 66-500

Multi chamber
underflow sump

1640 II Hybrid
Double deck
screening machine

TECHNICAL DATA



Dimensions/weight

shipping length	mm	12.192
shipping width	mm	2.438
shipping height	mm	3.200
shipping weight	kg	22.400

Capacities

slurry capacity	m ³ /h	500
max. feeding capacity	t/h	125
max. density	t/m ³	1,3
max. grain size	mm	80
separation cut	µm	25*

Installed power (400V/50HZ)

pump 1	kW	75
pump 2	kW	90
screening machine 2x 7,5 kW	kW	15
others	kW	N/A
total (e.g. air conditioner optional)	kW	180
required generator power	kVA	400

* Values were tested under laboratory conditions and may deviate depending on the application. (Particle size distribution, density and viscosity of the feed have a major influence).

FIELDS OF APPLICATION

Slurry treatment:

- Tunneling
- Microtunneling
- Diaphragm wall construction
- Well drilling

OVERVIEW

- Simple and straightforward setup
- Folding platforms for quick assembly
- Containerized frame for easy road and sea transport due to CSC-certification
- Wear-resistant Linatex pumps
- Wear-resistant, Linatex-lined, AT cyclones in the first stage
- Second hydro-cyclone stage is equipped with high-performance PU-cyclones
- Easily combinable with other components due to a modular design
- Extensive range of accessories available (see "Accessories" data sheet)

SPECIFICATIONS

Plant type

Containerized steel frame incl. CSC-certification

Screening machine

Double deck screening machine (width 1.6m, length 4.0m). Designed as a hybrid screening machine for pre-separation in the lower deck and dewatering in the upper deck. Maximum screening area while maintaining a compact design to reduce footprint.

Hydrocyclone level 1

Hydrocyclone type AT 66-500

Hydrocyclone level 2

Hydrocyclones 24x type PC 100-1

Electrical equipment

Electrical equipment including wiring according to VDE. 400 V 50Hz

Control system

Electrical control cabinet incl. SPS control (optionally extendable by touch panel)