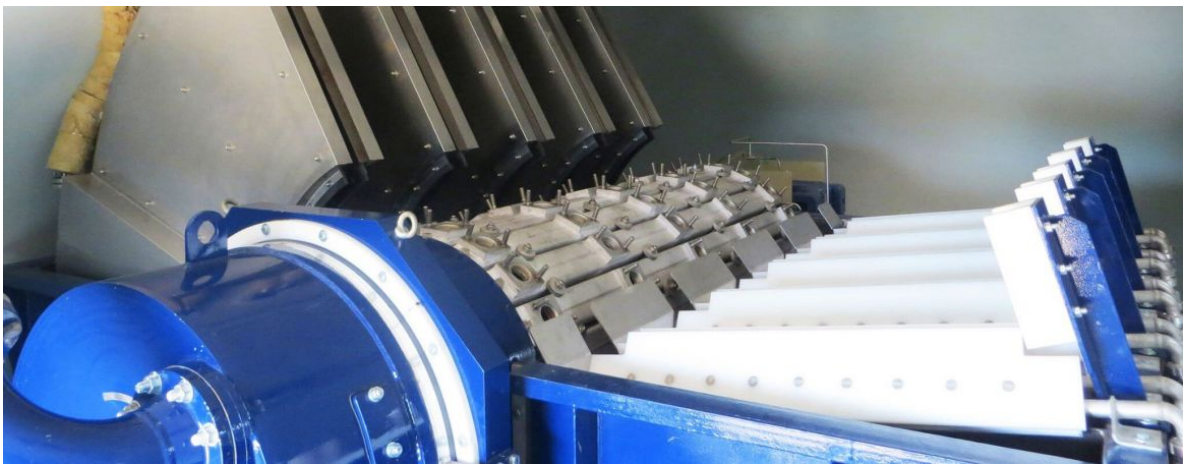

PRESSURE FILTRATION WITH DISC FILTERS

BoHiBar Disc filter - for particularly dry solids.

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Plant design & functionality

BoHiBar Disc filters from BOKELA represent the most advanced technology for continuous pressure filtration.

The basic principle is also known as hyperbaric filtration and very simple: a continuous rotary filter is installed completely in a pressure vessel filled with compressed air of up to 7 bar (a). A pump feeds the slurry into the filter trough in the pressure vessel. The filtrate flows through the filtrate pipes to the control head of the filter and from there to the filtrate separator. The filter cake is removed from the filter cloth by a reverse blast of compressed air and discharged through a solids sluice from the pressure vessel.

- filtration with high differential pressures Δp up to 6 bar (g)
- most modern disc filters with innovations known and proven by BoVac Disc filter technology
- option of installing steam hoods for steam pressure filtration
- closed process area (hermetic) inside the pressure vessel
- manholes allow quick and easy access to the pressure vessel from both sides and allow easy replacement of spare parts via a drawbridge
- reliable double gate valve for solids discharge
- low maintenance requirement due to innovative wear protection components

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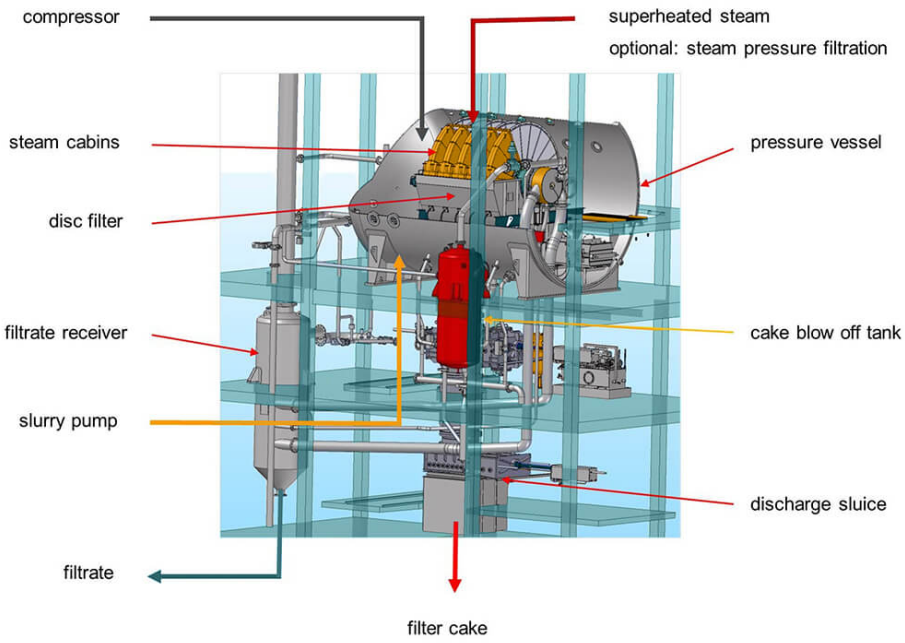

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Plant design & functionality

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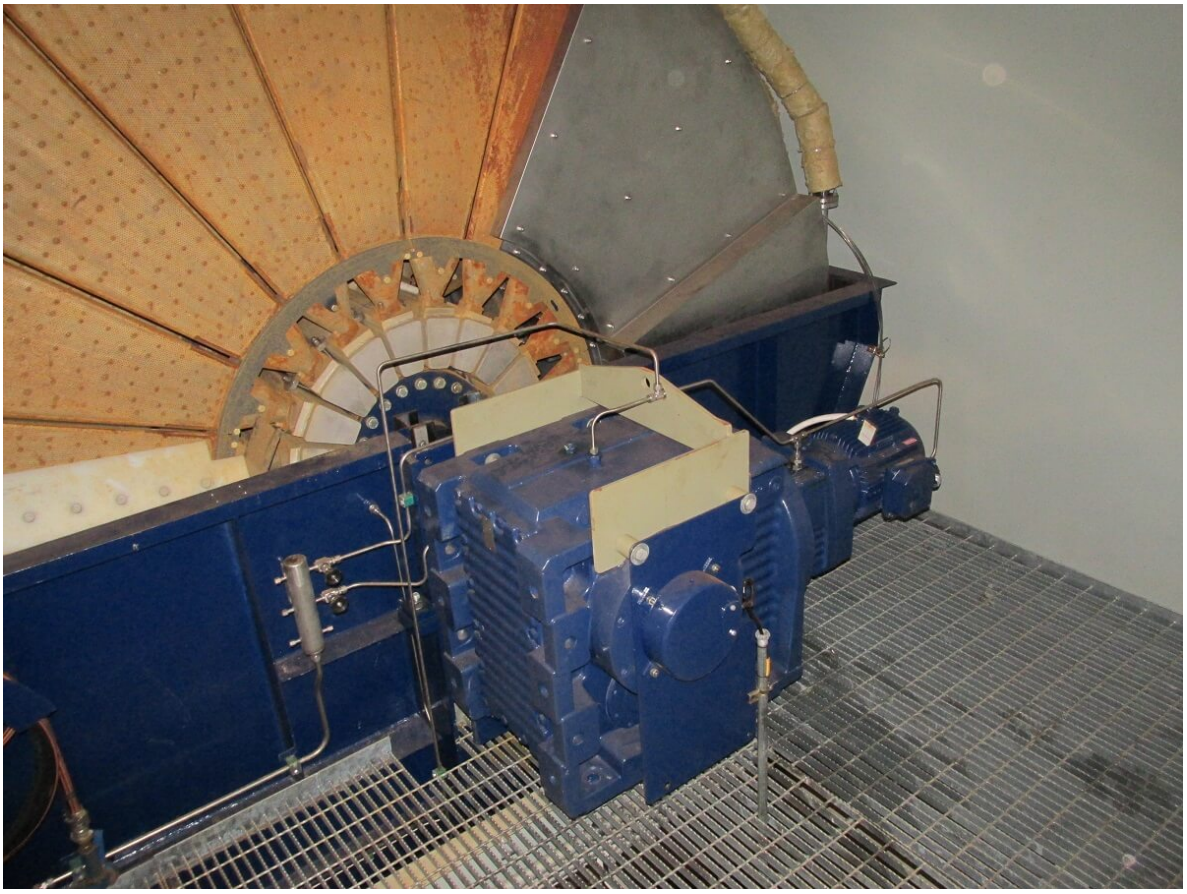

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BoHiBar Disc Filter-in-vessel

High solids throughput & low residual moisture

By using high pressures of up to 7 bar (a), BoHiBar Disc filters offer considerably higher pressure differences for filtration and demoisturing of the filter cake than vacuum filters.

Benefits:

- high solids throughputs even with fine particulate suspensions
- low residual moisture due to intensive demoisturing
- smaller filter area

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Dry solids by steam pressure filtration

BoHiBar steam pressure filtration is an innovative hybrid process which releases synergies through the combination of mechanical and thermal principles of action. In order to accelerate and intensify the demoisturing process, the filter cake is treated with steam. Each filter disc is equipped with a specially developed steam cabin, which covers only a limited part of the filter surface up to the steam break-through point. The cake is then dried by a compressed air stream to its final moisture content. Due to the accelerated dewatering, the residual moisture of the filter cake can be halved compared to a pressure filtration.

Benefits:

- extremely low residual cake moistures
- highly effective cake washing by condensing steam
- saving of drying air

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Dry solids by steam pressure filtration

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Dry solids by steam pressure filtration

Easy maintenance & high availability

BoHiBar Disc filters stand out with their most modern filter and plant design, characterized by reliable operation and ease of maintenance:

- high availability (> 92 %) thanks to innovative design and preventive maintenance concept
- fully automated operation with automated startup, shutdown and cleaning procedures (cleaning in place)
- high flexibility in operation in case of product fluctuations
- low maintenance requirement due to innovative wear protection components
- fast and effective maintenance of the entire system due to good accessibility and sophisticated maintenance aids
- reliable sluice technology with easy maintenance from the outside

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Technical data

Filter Type [-]	S42	S84	S168
Disc Diameter [m]	3.2	3.2	3.2
No. of Discs [–]	3	6	12
Filter Area [m²]	42	84	168
No. of Segments per Disc [–]	20	20	20
No. of control heads [–]	1	1	2
Pressure Vessel Design [–] Pressure Vessel Diameter [m]	vertical 4.5	horizontal 4.8/5*	horizontal 4.8/5*

*) for steam pressure filtration

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