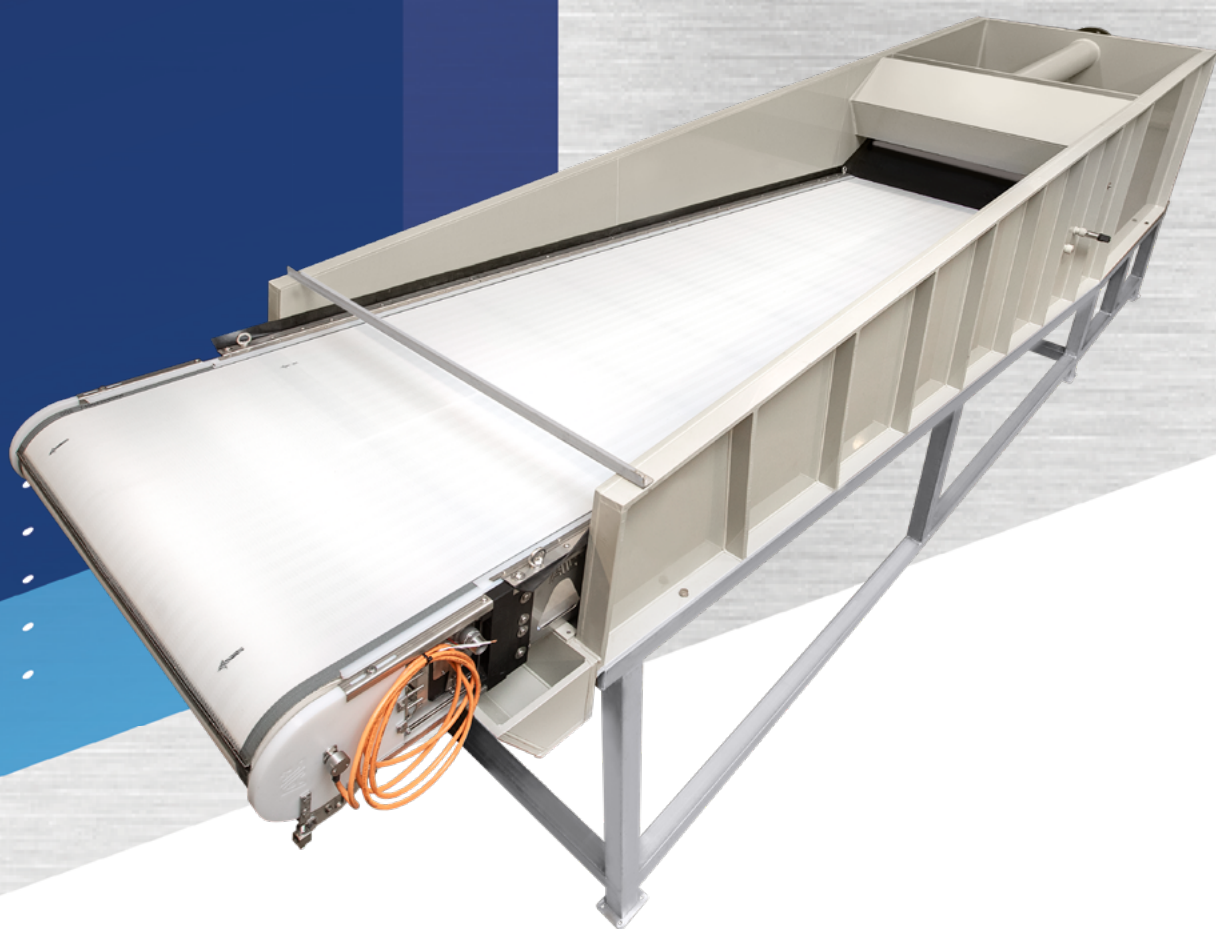
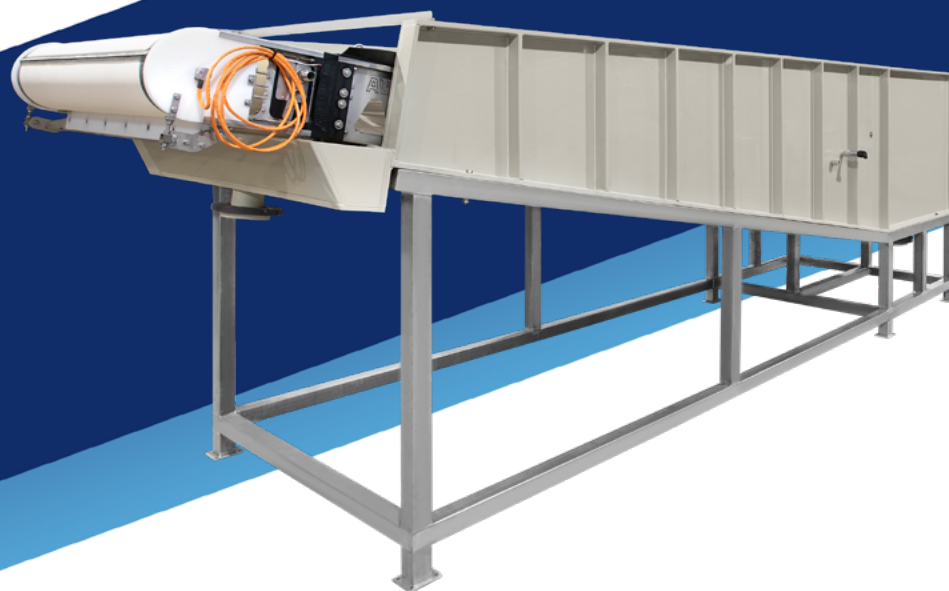


MP-BF

Belt filter



MIVALT



MP-BF Belt filter

In the treatment of process and wastewater, mechanical filtration is an effective and, at the same time, economically and environmentally friendly way of removing solids. The MP-BF screen belt filter is a suitable solution for water filtration across many areas and industrial sectors. Typical applications include, for example:

Municipal WWTP

Wastewater filtration requirements depend on the current stage of the treatment process. MP-BF screen belt filters are supplied with screens of selectable porosity, e.g.:

- Inlet screening (1000 – 5000 μm)
- Pre-treatment (100 – 500 μm)
- Tertiary polishing (40 – 60 μm)

Removing solids at treatment plants makes the subsequent treatment process more efficient. Solid biological matter is suitable for further processing, e.g. in biogas plants.

Food industry

Removal of solids within production lines:

- slaughterhouses
- dairies
- fruit and vegetable processing
- food supplements

Industrial filtration

Pre-treatment of surface water to prevent unwanted release of substances into the sewer system. Filtration of rinse water. Suitable, for example, for:

- recycling lines for secondary raw materials
- zoos and nature parks

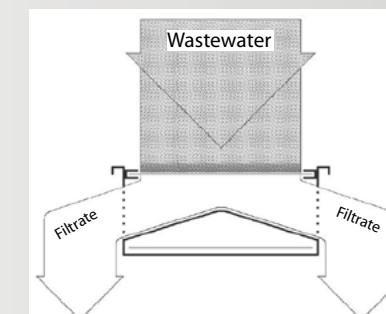
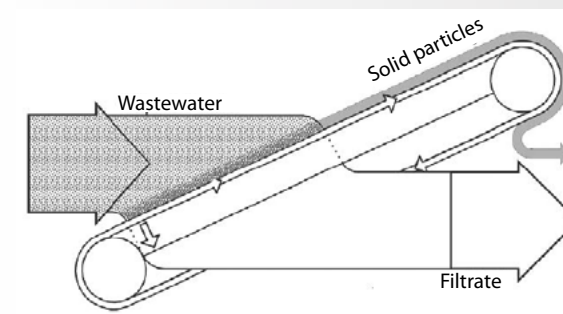
Aquaculture

Inland and coastal fish farms use screen belt presses for:

- pre-treatment and primary filtration
- sludge thickening/dewatering
- concentrating the backwash from drum filters

In some cases it is advisable to combine MP-BF screen belt filters with chemical pre-treatment to increase separation efficiency.

Principle



Models

The MP-BF series of screen belt filters is available in several standard size models depending on the application, flow rate, and available space. For larger flow rates, the models are installed modularly.

Compact design

All models are based on the same construction design and are therefore identical in terms of efficiency, reliability, and use.

An internal drum motor ensures a compact design, long service life, and low energy consumption. Available with two speed settings. Optionally, it can also be controlled via a frequency inverter with an automatic start/stop function, which increases the efficiency of the filtration function.

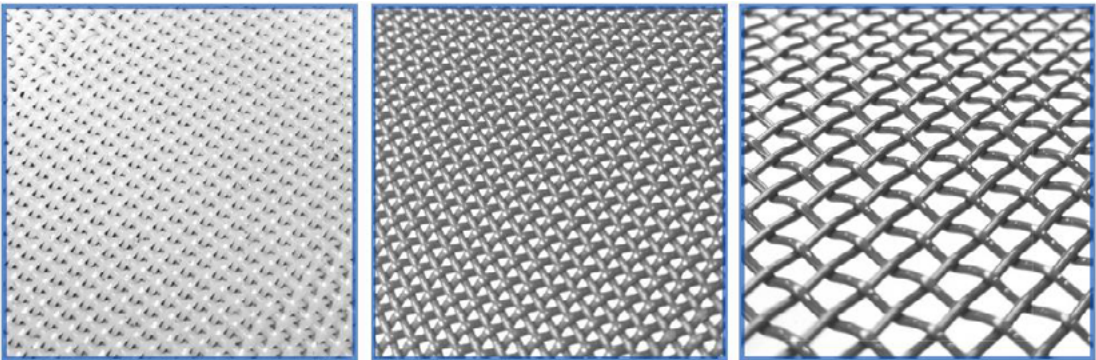
Flow capacity

The smallest model is designated 1.3C and the largest 3.6M. The maximum flow rate of the screen belt filter depends on the application and the choice of mesh size of the given screen. The length of the screen belt filter affects both the flow capacity and the dewatering efficiency. Capacity also depends on the concentration of solids. A rough estimate for the MP-BF-3.6M with 150 μm porosity is a maximum of 80 m^3/h ; with 5000 μm porosity, a maximum of 800 m^3/h .



Models

The screen type, with respect to filtration mesh size, is selected based on filtration requirements. The available mesh size range is from 40 µm to 5000 µm. High-quality polyester fibers are used to manufacture the filtration screens. The screens are woven in various patterns, which—together with the mesh size—determine the filtration efficiency and flow capacity. This combination ensures important properties such as dimensional stability, chemical resistance, and long service life.



Belt scraper

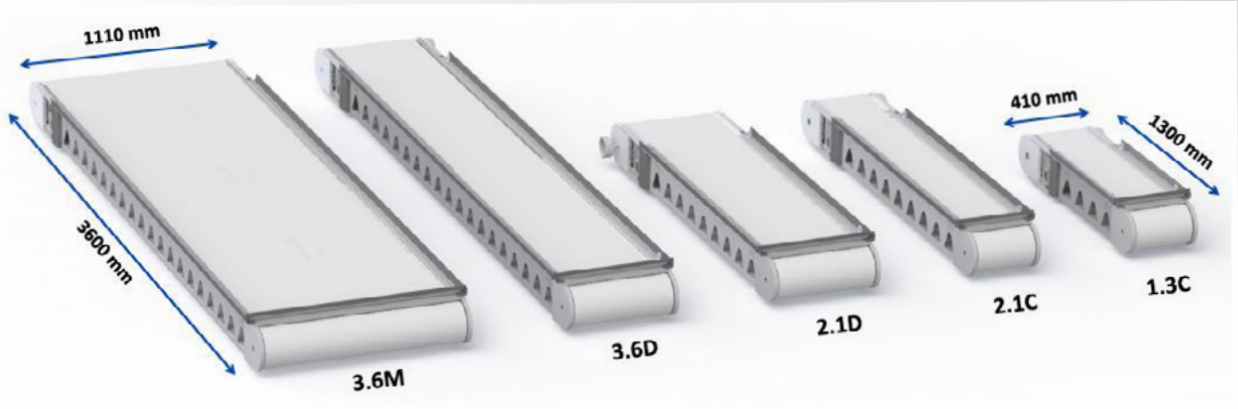
To ensure proper sludge runoff and removal of solids from the screen, MP-BF screen belt filters are equipped with a static scraper or an optional rotary scraper/knocker. The choice of scraper depends on the specific application and screen porosity. The rotary scraper is designed with a drum motor to maintain the compact construction of the screen belt filter.

Screen spray

For continuous, effective filtration, proper cleaning of the filtration screen is essential. This is best achieved by spraying the screen with filtered or clean water. For easy maintenance, the nozzles are installed with an easy-replacement feature. The screen belt filters are supplied with one spray bar and are prepared for the installation of an additional spray bar. A separate drain for the spray water prevents dilution of the sludge dry matter. Water spraying is also environmentally friendly thanks to low electricity consumption—compared with compressed-air blow-off. The spray water additionally captures fine particles, creating a healthier working environment compared with the swirling of particles caused by compressed air.

Parameters

Model	Max. capacity for mechanical filtration [m³/h]	Max. capacity for chem./mechanical filtration [m³/h]	Available screen porosity [µm]	Width [mm]	Belt width [mm]	Length [mm]
1.3C	2 - 35	0.15 - 1.5	40 - 5000	410	300	1300
2.1C	6 - 100	1 - 2	40 - 5000	410	300	2100
2.1D	10 - 170	2 - 4	40 - 5000	610	500	2100
3.6D	20 - 400	3 - 6	40 - 5000	610	500	3600
3.6M	60 - 800	6 - 12	60 - 5000	1110	1000	3600



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