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HUBER Belt Thickener DrainBelt



Belt thickener for highly efficient sludge thickening

The trough-shaped design of the feed reactor ensures the optimal conditioning and uniform distribution of the sludge over the full width of the filter belt.

The filter belt is guided horizontally by a drive and a tensioning roller. Via a feed chute positioned above the tensioning roller the sludge is smoothly fed onto the filter belt and transported towards the sludge discharge point by the slowly travelling filter belt. The sludge flocks are then gently settling on the rotating filter cloth and the water separated by flocculation drains off by gravity. The sludge cake is taken off the filter belt by a plastic doctor blade mounted on the drive roller.

To improve filtration, the filter belt is equipped with pillow blocks that plough channels into the sludge cake thus facilitating water runoff from the sludge cake. As an option a ramp can be installed prior to the discharge to decelerate the sludge, which produces a sludge roll on the belt and further increases the thickening degree.

After the sludge has been taken off the belt by the doctor blade, the filter belt passes a spray nozzle bar that cleans the belt washing sludge particles out of the belt pores. The wash water is collected, separate from the clear filtrate from the thickening process, below the filter belt in a filtrate pan that is integrated in the plant housing.

During operation the clear filtrate is impounded in the collecting trough and can therefore be used as an intermediate storage tank for feeding the spray nozzle bar.

The thickened sludge is discharged into an integrated trough from where it is pumped off.

Benefits

The HUBER Belt Thickener DrainBelt guarantees minimum operating costs:

Very low coagulant agent demand

- Efficient nozzle feeding of coagulant agent
- Variable mixing energy
- Flow-optimised flocculation reactor
- Gentle sludge treatment for minimum shear stress

Maximum filtrate quality

- A variety of filter belt qualities
- Separate collection of clear filtrate and filter wash water
- Optional return of wash water
- No return of polluted filtrate into clear filtrate

Maximum thickening degree

- Long thickening zone, low belt velocity
- Adjustable pillow blocks for sludge restacking
- Optional ramp for increased thickening degrees

Minimum maintenance costs

- Long filter lifetimes
- Easy maintenance due to centrally positioned inspection openings
- Fouling-resistant roller bearing for a virtually unlimited life

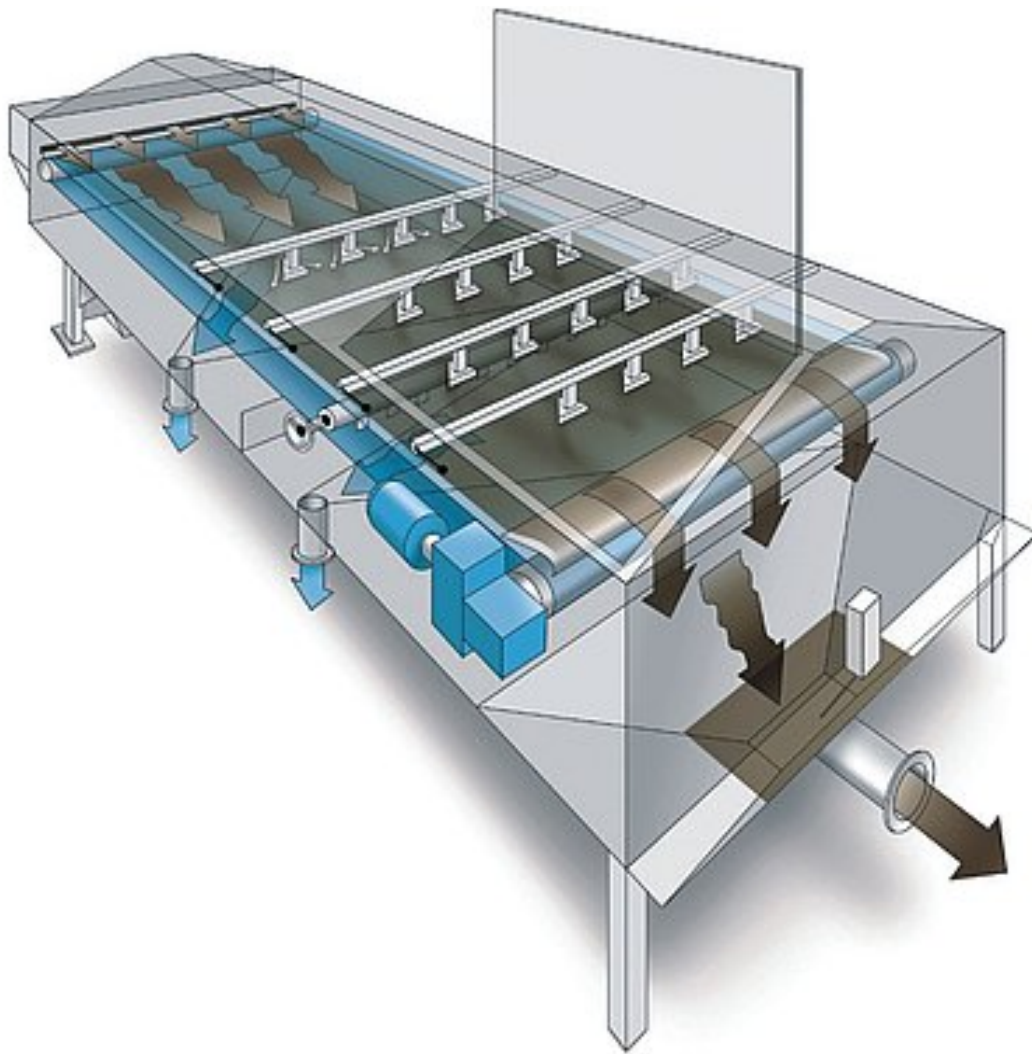
Downloads

 [Brochure: HUBER Belt Thickener DrainBelt](#) [pdf, 466 KB]

Case Studies

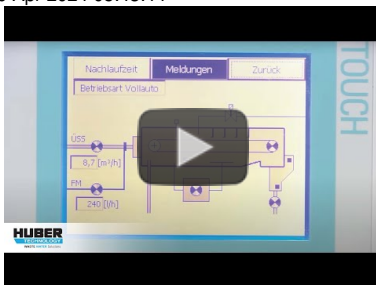
- [A HUBER Technology Wastewater Case Study at Uttoxeter STW for Severn Trent Water](#)
- [A HUBER Technology Wastewater Case Study at Cannock STW for Severn Trent Water](#)

Design Sketch



Media





Video: HUBER Belt Thickener
DrainBelt - here at a municipal
WWTP

[https://www.youtube.com/watch?
v=6pcHf8aJpqQ](https://www.youtube.com/watch?v=6pcHf8aJpqQ)

More products of this group: Sludge Thickening

- [HUBER Disc Thickener S-DISC](#)
- [HUBER Rotary Screw Thickener S-DRUM](#)

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