

HUBER Drainbelt DB



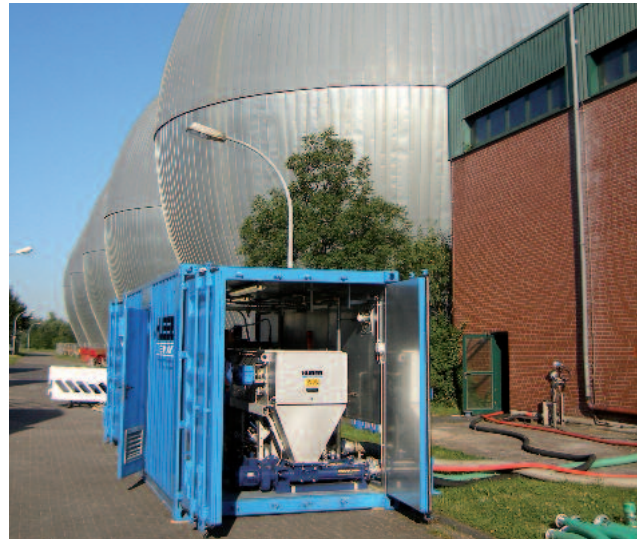
Belt thickener for highly efficient sludge thickening

➤➤ The potentials of sewage sludge thickening

Sludge volume reduction through sludge thickening significantly reduces sewage sludge transport costs. Concentrated sludge is even the basic prerequisite for the efficient operation of digestors and dewatering systems.

The following criteria are decisive for the selection of the most economical thickening process:

- Low operating costs
- High-efficiency thickening
- Reliable technology

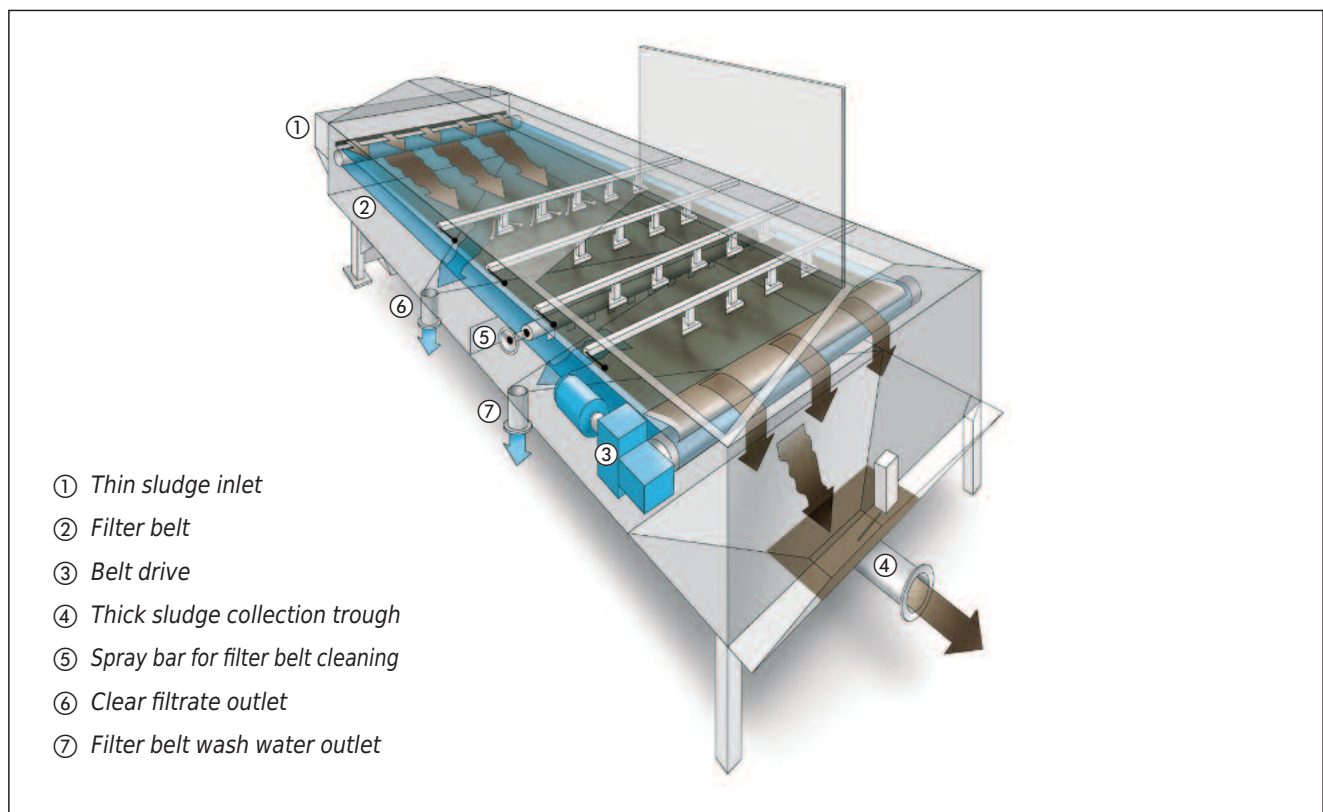


Mobile demo unit

➤➤ Design and function of the HUBER Drainbelt DB

A feed reactor ensures the uniform distribution of the conditioned sludge over the full width of the continuously travelling filter belt. The water filtered through the belt filter cloth drains off into collection troughs. Chicanes furrow the sludge to facilitate drainage and support the production of a concentrated sludge cake. The initial thin

sludge volume is reduced by approx. 85 %. When the sludge cake has been discharged into the thick sludge collection trough a spray bar cleans the filter belt.



►► The user's benefits

Low operating costs

- Sludge volume reduction > 85 %
- Typical thickening results > 6 %, therefore:
- Significantly reduced costs for further sludge treatment
- Minimised coagulant consumption, normally only $2 - 3 \text{ g}_{\text{effective substance}}/\text{kg}_{\text{DR}}$
- Belt filter cleaning with service water
- Low specific energy demand

High performance

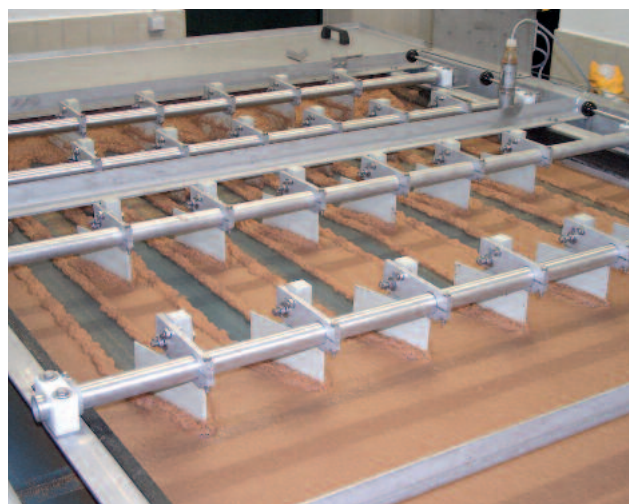
- Large active filter surface
- Very long thickening zone, with the result of:
- High specific throughput capacity up to $45 \text{ m}^3/\text{h}$ per metre of filter belt width
- Increased filtration results through repeated sludge restacking
- Selectable filter cloth options to meet specific requirements

Reliable technology

- Long filter cloth life due to slow filter belt velocity
- Typical filter belt velocity < 20 m/min
- Automatic control technology
- Big inspection openings
- Easy to operate and maintain



Thickener installation for up to $100 \text{ m}^3/\text{h}$



Thickening of dairy sludge



Belt thickener for $60 \text{ m}^3/\text{h}$

➤➤ Special applications

Thickening of critical sludges

The HUBER Drainbelt DB is especially designed for sludges with poor settling properties:

- Minimised coagulant consumption due to efficient distribution
- Constant thickening result due to the long sludge residence time on the filter belt
- Increased thickening results due to a ramp installed to decelerate the sludge prior to being discharged
- A variety of filter belt qualities to meet specific requirements

Efficient use of water

Filtrate water can be used to wash the filter belt:

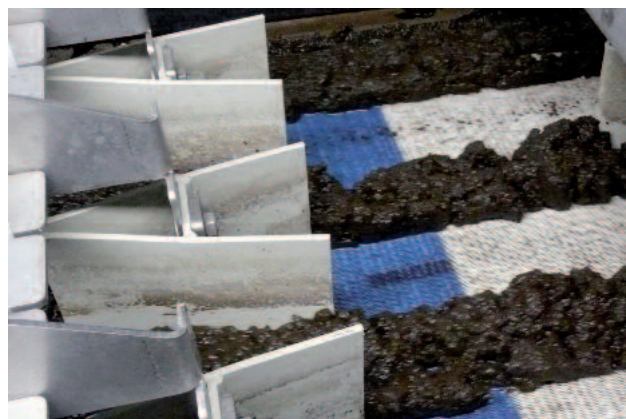
- No need for external wash water
- Reduced operating costs
- Saves water resources
- Hydraulic load reduction

The polluted water from filter belt washing is discharged separately and therefore can be recycled through the HUBER Drainbelt DB:

- Separation degree increase from 97% to 99%
- Minimised return load to WWTP
- Reduced hidden operating costs

➤➤ HUBER Drainbelt DB sizes

Size	Belt width [mm]	Throughput capacity [m ³ /h]
0.5	500	23
1.0	1000	45
1.5	1500	68
2.0	2000	90



Thickening zone



Filtration process



Belt washing with filtrate water

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