Cost-effective sludge dewatering for independence in sludge disposal

The Q-PRESS® is a screw press with a conical screw shaft and cylindrical sieves consisting of three treatment zones: inlet and drive zone, three-part thickening and dewatering zone, and press zone with pneumatic counter-pressure cone.

In the first part of the thickening and dewatering zone the supernatant is quickly removed by the feed pump via a large free filter surface at a low primary pressure. A pressure probe in the feed area controls the primary pressure thus ensuring a constantly high filtrate quality.

In the second part of the screen the volume of material between the screw flights is reduced by the conical screw and the sludge pressed against the inner screen surface so that the sludge is dewatered, with a continuous reduction of the filter cake thickness. The screen apertures are much smaller in this screen section.

In the third part of the screen the residual water is pressed out of the sludge, at a minimum filter cake thickness, by the pneumatic counterpressure cone at the press discharge. The dewatered sludge is pushed by the conveying screw past the pressure cone into the discharge chamber. The sludge residence time in the screw press and thus the filtration time can be adjusted to individual requirements by adjusting the rotational speed of the screw shaft.

Special applications of the Q-PRESS®

Dewatering of thin sludges

Due to pump feeding, large volumes of sludge water are removed already in the pre-dewatering zone. This permits cost-efficient dewatering of thin sludges with a solids concentration < 1%. This application allows typical dewatering results of 18 – 25% DS and achieves a sludge volume reduction up to > 97% in a single step!

Variable sludge characteristics
Dewatering performance is usually impaired and operator attention increased by frequently varying sludge quality. Our HUBER Screw Press Q-PRESS® automatically self-adjusts to over- and under-loading. A control loop makes sure that optimal operation is always maintained, with minimised operator attention.

Products

- HUBER Screw Press Q-PRESS®
- HUBER Screw Press S-PRESS
- HUBER Bogenpress B-PRESS
- Centrifuges

Benefits

ADVANTAGES OF THE HUBER SCREW PRESS Q-PRESS®

- Insensitive to coarse material due to the wide gap between the screw conveyor and sieve
- No permanent sieve cleaning required, low wash water consumption
- Pneumatically controlled pressure cone system
- Defined sludge residence time
- Permanent movement of filter cake, minimized filter resistances
- Minimum wear due to the low speed of the compacting screw
- Minimized noise
- Low energy consumption
- High dewatering degrees with fibrous sludge

Case Studies

- New TOTEX solution for Sludge Dewatering at Plymouth
- Septic Sludge Management in Kota Bekasi (Indonesia)
- Dynamic inline mixer for optimized sludge dewatering
- HUBER's Screw Press Helps Cardston WWTP Make Positive Impact on Community
- From thin sludge to dry granulate – all from one source
- HUBER sludge dewatering solution for new wastewater treatment plant in a dairy industry
- New HUBER Screw Press Q-PRESS® 620.2 for sludge dewatering: operational experience on STP Bad Orb
- Case Study Dairy Crest Davidstowe Creamery, Cornwall
- Q-PRESS® – The new HUBER Screw Press
- HUBER flotation plant and screw press are a great help with the apple harvest in Serbia
- Screw Press replaces centrifuge: Successful operation of a HUBER Screw Press RoS3Q 440 on WWTP Gleißenstein
- Sludge Dewatering in a UK Creamery: A case study at Premier Food Ambrosia Creamery, Lifton / UK
- Economy of space in existing structures – STP St. Oswald in Austria
- Cost-efficient, low wear: HUBER ROTAMAT® Screw Press RoS 3Q in Finland
- More than 96% sludge volume reduction: Big HUBER Screw Press units convince international customers
- New Screw Press size for high throughputs
- Successful HUBER overall concept for beverage industry in Croatia
- Racing technology for optimized sludge dewatering
- Efficient Sludge Treatment at Small Plants
- Small Screw Press RoS 3Q Exceeds all Expectations
- Screw Press RoS 3Q: New press size up to 100 000 PE
- Romanos Hotel - Greece

Downloads

- [Brochure (US version): HUBER Screw Press Q-PRESS®](pdf, 2.13 MB)
Animation: Function and components of new HUBER Screw Press Q-PRESS® 620, 800
https://www.youtube.com/watch?v=1dSGJYT1Ck

Animation: Function and components of HUBER Screw Press Q-PRESS® (RoS3Q) 440
https://www.youtube.com/watch?v=n_mnNdQsaCo

Video: HUBER Screw Press Q-PRESS® (RoS3Q) - here at a municipal WWTP
https://www.youtube.com/watch?v=5VsPNKbkJyA

Video HUBER Screw Press Q-PRESS® (RoS3Q) - here in beverage industry
https://www.youtube.com/watch?v=T5sOUqy-zxk

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