HUBER Solutions for Septic Sludge Treatment

Where wastewater treatment is decentralized, septic sludge is produced, and must be evacuated, collected and treated in a centralized plant. Where possible, this is done at a centralized wastewater treatment plant with sufficient surplus capacity; but where such a plant is not available nearby, a special septic sludge treatment can be built.

Septic sludge needs to be pretreated to remove disturbing solids (e.g. debris) and heavy solids (grit and gravel). We offer various well-proven products for sewage sludge screening, that are successfully in operation since decades on a global scale.

The mechanically pre-treated septic sludge is dewatered in our Screw Presses. After composting, the treated septic sludge is land applied as fertilizer and for soil improvement.

We treat filtrate from sludge dewatering in a HUBER Membrane Bio-Reactor and recycle the effluent as process water (wash and spray water). Surplus effluent can be reused for irrigation.

Click on the image to get a detailed, interactive view with additional information and links.
System Description

Septic sludge smells like foul eggs and is highly corrosive. It contains grit and gravel as well as all kinds of debris that can pass through a commode.

Septic sludge is supplied with tanker vehicles and directly discharged into a HUBER ROTAMAT® Complete Plant for complete mechanical pre-treatment. A Fine Screen and Grit Chamber are integrated in this unit. The fine screen simultaneously washes, dewater and compresses the removed screening, which are disposed of as solid waste. Mineral solids are removed from the grit chamber and classified; then they are washed and dewatered in our Grit Washer. The well washed mineral product is reusable as construction material, e.g. for road bedding.

After all disturbing solids have been removed by pre-treatment, the septic sludge is dewatered in our ROTAMAT® Screw Press. The sludge cake is then composted for aerobic stabilisation and pathogen reduction.

Alternatively, thin septic sludge is concentrated in our ROTAMAT® Screw Thickener and then stabilized in an anaerobic digester. The generated digester gas is used for cogeneration of power and heat. Sludge dewatering occurs after digestion.

The produced compost or digested sludge is land applied as fertilizer and for soil improvement, or used as soil material for landscaping or land reclamation.

We treat the filtrate from sludge dewatering in a HUBER Membrane Bio-Rector. The effluent containing no solids and bacteria is recycled as process water (wash and spray water). Surplus effluent can be used for irrigation (it contains dissolved N and P nutrients).

All HUBER machines are completely enclosed to prevent odour nuisance, and the entire HUBER equipment is made of corrosion-resistant stainless steel.

Case Studies

- Septic Sludge Management in Kota Bekasi (Indonesia)
- HUBER’s Sludge Screens Help SAWS Receiving Stations Handle Deliveries
- State of The Art Septage Station Handles Large Volumes Effectively
- HUBER SeptageTreat® Solution in Sweden
- Well Received Septic Sludge in Finland
- HUBER Septic Sludge Treatment in Kuching/Sarawak
- Mineral fertiliser from sewage sludge

Downloads

- Brochure: HUBER SeptageTreat® Solution - Septic Sludge Treatment for Reuse [pdf, 305 KB]

Photos
Products

- HUBER Sludge Acceptance Plant ROTAMAT® Ro3.3
- HUBER Sludge Acceptance Plant RoFAS
- HUBER Screw Press S-PRESS
- HUBER Membrane Filtration VRM®
- HUBER Rotary Screw Thickener S-DRUM
- HUBER Grit Washer RoSF4 T