

CASE STUDY:

LACKEBY ROTO-SIEVE® SEPTIC UNIT

SÄTER WWTP



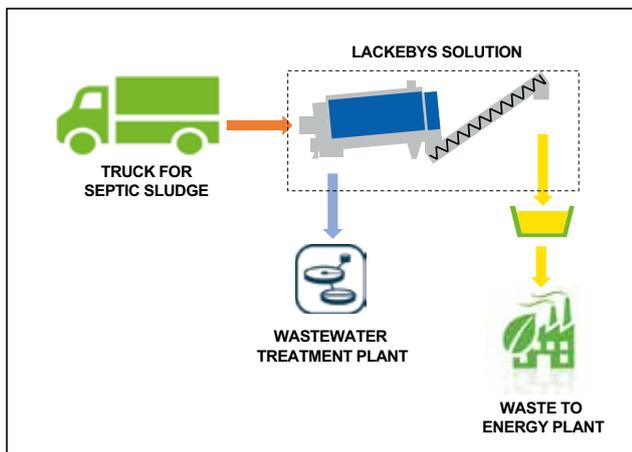
Septic receiving for demanding applications

The wastewater treatment plant in Säter is designed for 8,000 PE. In addition to wastewater, external sludge from wells and septic tanks are received, but also screenings from some smaller nearby treatment plants.

The customer's equipment for external sludge treatment was built up around a receiving tank containing two step screens. However, the equipment was sensitive to gravel and grit and they frequently experienced severe problems with screenings clogging the screens discharge zones. In particular, problems were identified at the times when they received external screenings from the nearby smaller treatment plants. These problems were to the extent that a plant operator had to work full time to manually clean the discharge zones during operation. This was costly and resulted in a very poor working environment.

Säter municipality

Säter municipality located in the middle of Sweden has a population of 11 000 inhabitants and operating eight different sewage treatment plants.



The Lackeby solution:

Lackeby presented a solution consisted of a Lackeby Roto-Sieve® septic unit with integrated screw press for separating, washing and dewatering of the screenings. The septic unit is based on the well-known Lackeby Roto-Sieve® drum screen which has been modified for septic receiving. The unit's updated design effectively handles high flow rates of demanding septic sludge. Thanks to the screen-drum design, there is an optimal separation of rocks, gravel and fibrous material without any risk of clogging.

When the unloading of the truck is completed, the trough is automatically emptied of accumulated liquid, which minimizes problems with foul odors in the surroundings.

The result:

In the summer of 2018, a Roto-Sieve® RSS 24 with integrated screw press was installed at Säter WWTP. The screen-drum is made of stainless-steel perforated plates with \varnothing 4 mm perforation and can manage flow rates up to 100 m³/h despite large amounts of screenings.

The screenings are effectively dewatered in the integrated screw press to achieve reduced volume and high dry content while being encapsulated in the bagging system.

Thanks to the control panel and the flow meter included in Lackebys delivery, the customer can now also measure and record each discharge. By means of an electronic tag system, the truck driver registers quickly and can then start the emptying sequence with just a push of a button. The control system together with the efficient washing function makes the unit almost completely self-cleaning. This is done through integrated brushes and spray nozzles which minimizes manual maintenance.

The plant operators are now experiencing a significant improvement in both function and working environment. The maintenance, which was previously very extensive and time-consuming, has now been limited to only preventive measures.

Lackeby Products AB has more than 50 years of experience in designing and manufacturing high performance products for resource-efficient heat recovery and wastewater recycling. In our production facilities in Sweden we have made thousands of products for the toughest environments worldwide. We are well known for our ability to customize products to each customer's unique requirements.

All of our products are characterized by reliability, long life cycles and easy maintenance making Lackeby Products a trusted partner and supplier of products for plant upgrades or new plant constructions. We guarantee high quality, excellent performance and complete satisfaction.