

Sobyte Belt Filter



High Capacity, High Performance, Small Footprint, Low Cost Filtration

Key Features & Benefits:

- Effective treatment
- Proven
- Automatic operation
- Self-cleaning
- Cost saving
- Reduced footprint
- Low maintenance
- Quick delivery
- Simple installation
- Easy retrofit

How We Create Value:

- Adds treatment capacity quickly
- Replaces settlement tanks
- Effective BOD/suspended solids removal
- Purchase or rental options
- Municipal & industrial applications
- Robust stainless steel construction

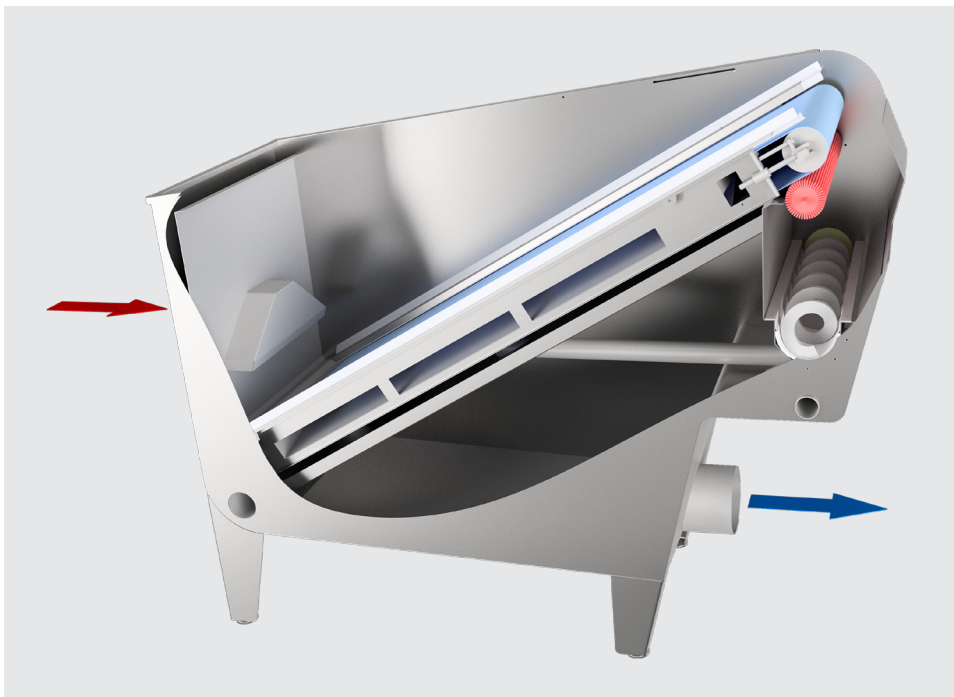


High Capacity, High Performance, Small Footprint, Low Cost Filtration

The Sobyte automatic, self-cleaning belt filter is manufactured by Swedish filtration specialists Nordic Water Products AB. The highly efficient filter removes particles from water in a cost-effective and space-saving way. The filter replaces the standard primary filtration of municipal wastewater and sedimentation processes achieving a BOD and suspended solids removal that is at least equivalent to conventional primary settlement. Further, this impressive performance is delivered with a much-reduced footprint and a significantly reduced investment.

Operational and maintenance costs are equivalent to conventional primary settlement tanks and scraper systems. The process produces an extremely dry sludge and chemicals are normally not required which facilitates the further treatment or processing of recoverable material.

How it works



The belt speed is controlled, which allows a layer of sludge to build up on the cloth to increase filtration efficiency.

When the screen requires cleaning, the belt rotates so that particles are removed with an integrated brush. A high-pressure spray bar then cleans the belt, and the dislodged sludge can be discharged to a screw conveyor for further washing and pressing to high dry solids content. The wash water is, together with filtrate from the press, returned upstream. The filter belt is very robust and is readily replaced when required.

The Sobyte belt filter has gained an excellent reputation over a 25-year period as an automatic, self-cleaning compact solution for primary treatment to replace settlement tanks. More than 200 systems are currently in use, with around 100 of these in the municipal primary treatment market.

The filter takes screened wastewater to an inlet above the screen belt, the wastewater then flows under gravity through the moving filter belt. Filtered wastewater is discharged from the bottom of the tank.

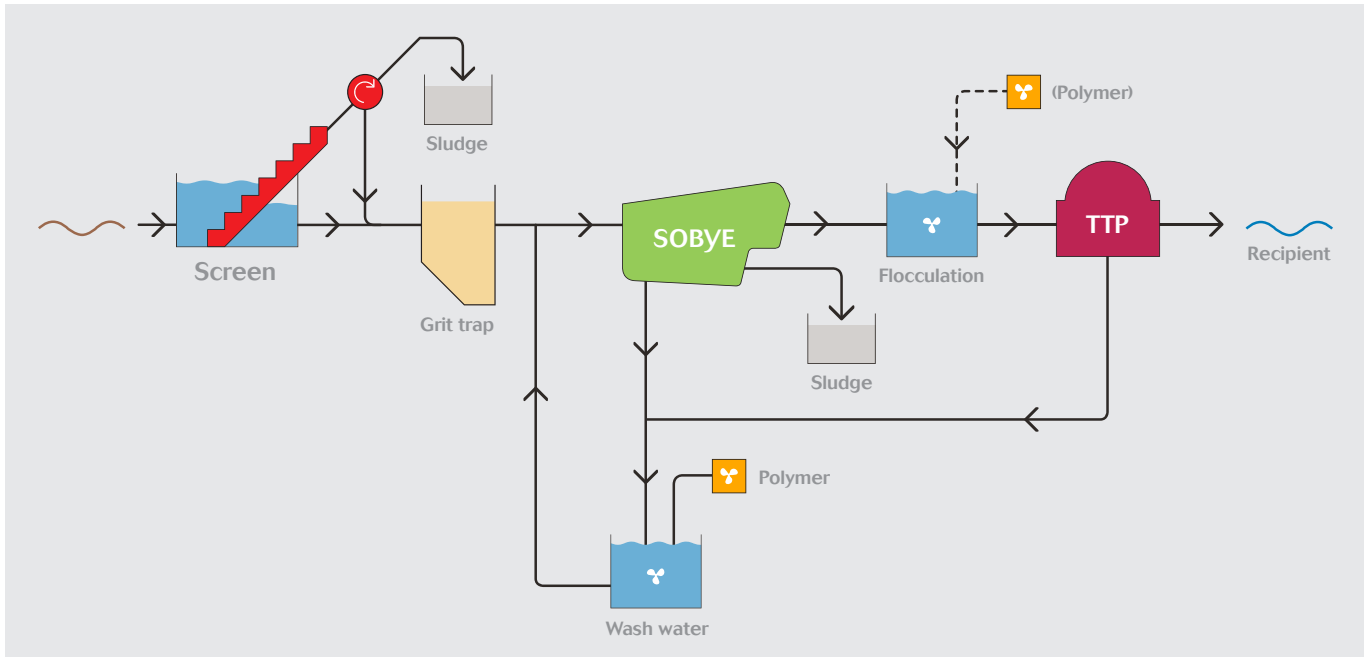
There are three sizes of belt filter suited to the municipal wastewater market, the Sobyte TD 07, the TD 14 and the TD 20, which are renowned as small-footprint units with a high filtering capacity: Their effective filter areas are 0.74m², 1.45m² and 2.0m² respectively.

The units are fabricated in stainless steel, and the heavy-duty polyester belt mesh aperture size ranges from 120-800 Microns. Flow volumes are up to 50m³/h for the TD-07, 100m³/h for the TD 14 and 150m³/h for the TD 20.

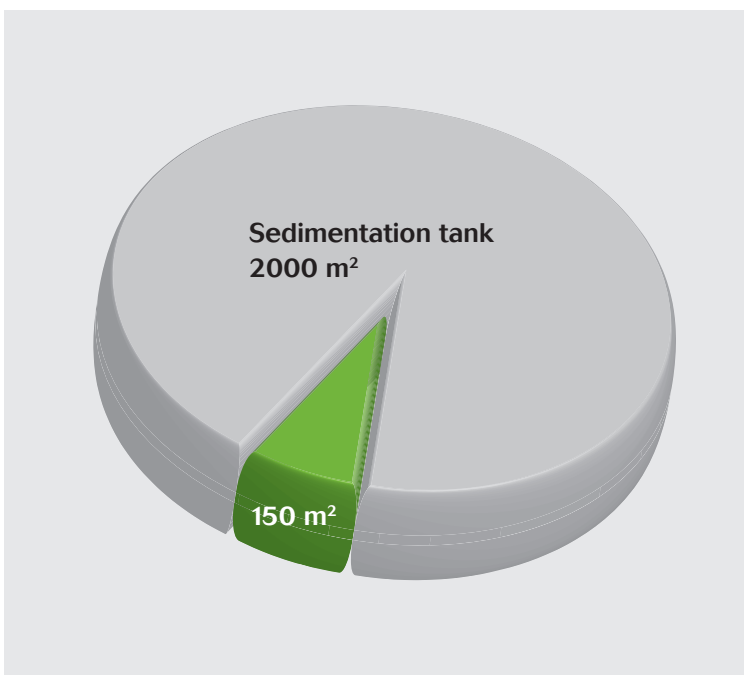
Soby Filter



Flow example, Municipal Wastewater



Advantages of the Soby Filter



Compact and efficient

The Soby filter has an exceptionally high filtering capacity in relation to its small size. It is therefore an excellent choice when space is limited and it provides savings because no large structures or tanks need to be built. The filter fits well into an existing facility and is also suitable as a channel filter. The filter tank casing is made of stainless steel (EN1.4404) and wetted parts are IP-67 rated.

Low operating costs

The Soby filter uses an integrated brush for cleaning the filter fabric, which means no compressor, or pump is required. Competitor belt filters using compressed air for cleaning require energy-consuming compressors that are expensive both to purchase and operate.



Applications

More than 200 systems are currently in use, with around 100 of these in the municipal primary treatment market where they are used for pre-filtering of municipal wastewater. Other applications include fish farming and fish processing.

A trial unit is available to demonstrate performance to customers.

Flexible and robust construction

The filter is available in three standard versions with different capacities. Custom models have also been developed to meet other specific industry requirements. The belt filter can also form part of a larger system. The filter comes with a very strong fabric that can withstand higher-pressure drop than competitors' fabrics.

User-friendly working environment

Cleaning the fabric with a brush and washwater prevents the release of particles and bacteria into the air. Together with a low noise level this gives operators a good working environment. Operating costs also show that brush and washwater is a highly competitive method of belt cleaning. The required ventilation from the screens is only 5-15 cbm/h, which means very low ventilation costs.

Smart design – easy to maintain

The Soby filter fabric is incorporated into a cassette that can be easily removed from the filter tank for maintenance and repair. The fabric is made of polyester, which ensures an exceptionally long operating life cycle. Because the fabric can easily be replaced in about 30 minutes, without the need to change the belt filter in general, future changes in filtration requirements can be readily accommodated.

Putting you in control

The belt filter can be delivered together with a control panel and can be equipped with control instrumentation and monitoring to meet specific needs such as remote control.



Cleaning the belt with a brush and water is one of the most energy efficient solutions. It prevents the spreading of particles and bacteria through the air. This, combined with its low noise level, gives your staff a good working environment.

About Nordic Water

As pioneers of inclined plate settling, continuous backwash filtration and micro screening, Nordic Water is a leader in filtration solutions for the water and wastewater treatment industries. Through intelligent engineering and advanced technology their individual technologies and packaged systems deliver reliable filtration and superior separation.

Nordic Water have chosen Jacopa to work with on an exclusive basis to bring this innovative technology to the UK and Ireland markets.