AUTOFRIC

Sludge Treatment and Conveying

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Content

COMPLETE SOLUTIONS FOR

Water & Waste Treatment

Industrial Processes

District Heating Plants

Biogas Production

Recycling and Waste Treatment

SLUDGE TREATMENT AND CONVEYING

Autofric develops and manufactures products for high-efficiency handling of sludge and residual materials in wastewater treatment plants, heating plants, and various industrial processes. We offer a broad range of high-quality products covering the entire sludge flow - from polymer preparation and dosing to screening, thickening, dewatering, and sludge transport.

We offer unique expertise in the design and manufacturing of machinery for sludge handling. Based on our customers' specific needs we develop solutions tailored to individual requirements.

We participate in the initial design phase and follow the project from start to finish. We also have a well-established organization for ongoing service and support.

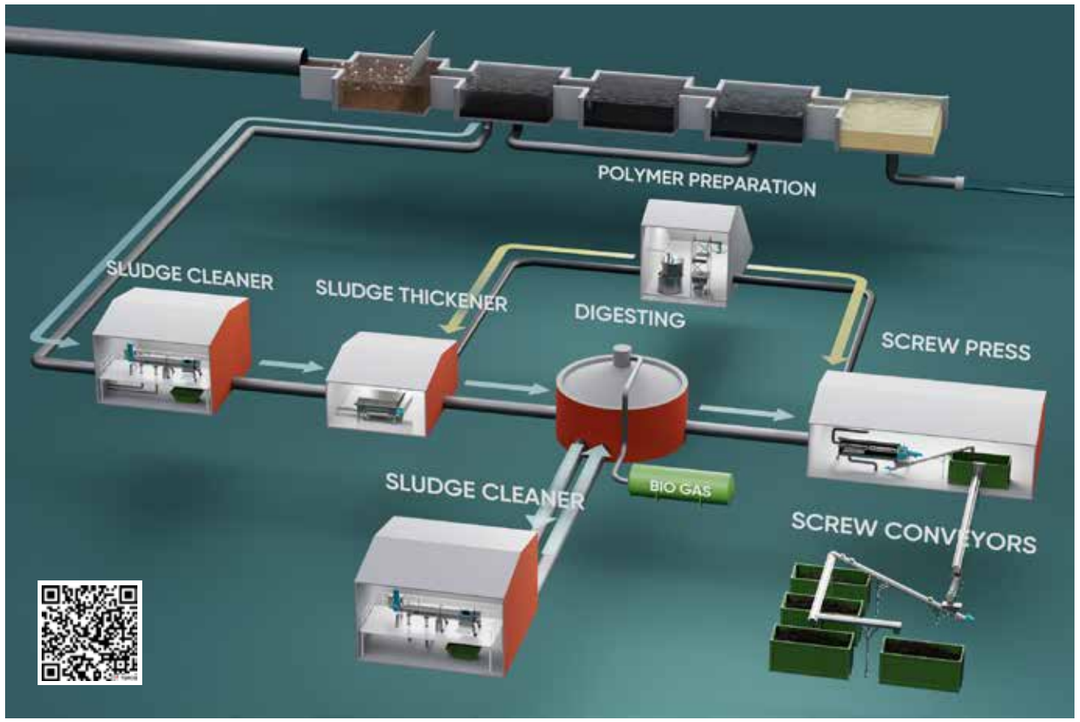
Our program includes complete systems for polymer preparation and dosing, providing solutions that ensure correct concentration and precise dosing for each customer's unique process.

We also offer a wide range of machines for screening and thickening, as well as screw presses in various sizes for highly efficient dewatering of wastewater sludge or industrial residual products.

CONVEYORS AND SPIRALS

Another area of specialization is our production of screw conveyors and spirals.

With in-house design, advanced manufacturing expertise, and our own specially developed machinery, we can offer cost-effective and reliable conveying solutions optimized for each individual user.



PREPARATION AND DOSING

Autofric offers high-quality systems for polymer preparation and dosing that ensure proper mixing and precise addition of polymer in sludge dewatering and industrial processes.

Double Tank ADT

Our double tank is designed to ensure optimal dissolution and precise dosing of polymer across a wide range of applications. With a proven design and well-thought-out functionality, the system delivers consistent quality, high reliability, and efficient operation.

The tank is based on a traditional and well-established design for polymer preparation. The construction consists of an upper mixing tank and a lower storage tank, creating a clear and efficient two-step process.

Advantages

- Compact, automatic, hygienic, and reliable operation
- Polytube and separated tanks ensure a fully homogeneous solution
- Fully constructed in heavy-duty stainless steel with stainless steel motor ball valves and stainless steel piping
- Internationally proven design with many years of successful use

Function

In the upper mixing chamber, polymer and water are combined under controlled conditions to ensure uniform and effective dissolution.

The mixing chamber is positioned directly above the storage tank, resulting in a compact and functional system with smooth transfer of the solution.

The fully mixed polymer solution flows down into the lower storage tank, where it is stored prior to further dosing into the process. The separation of mixing and storage contributes to stable operation and minimizes the risk of disturbances.

The design ensures efficient mixing and sufficient maturation time, which is particularly important when using emulsion polymers. The result is a reliable system that delivers consistent quality and optimal performance over time.

Polymer Preparation Unit AEP

The AEP polymer preparation unit is an efficient and user-friendly system that ensures a homogeneous, high-quality polymer solution. It is designed to provide stable and accurate dosing for precipitation and flocculation processes.operation.

AEP is based on modern technology for the preparation of liquid polymer solutions and delivers a consistent end product with high precision. The equipment features a simple design and provides reliable dosing for an optimized process.

The preparation takes place in two stages: first, the mixer is started, and then the concentration phase begins, where polymer and water are added. The water flow is regulated via a flow meter proportionally to the dosing pump (optional), ensuring the correct concentration and consistent quality.

Advantages

- Efficient and user-friendly
- Ensures a homogeneous, high-quality polymer solution
- Stable operation and accurate dosing for precipitation and flocculation processes

Big Bag System ABS

Our big bag system is a complete and reliable solution for dust-free, safe, and hygienic handling of bulk bags. The system is designed for efficient emptying and onward conveying of materials, with a focus on quality, workplace safety, and long service life.

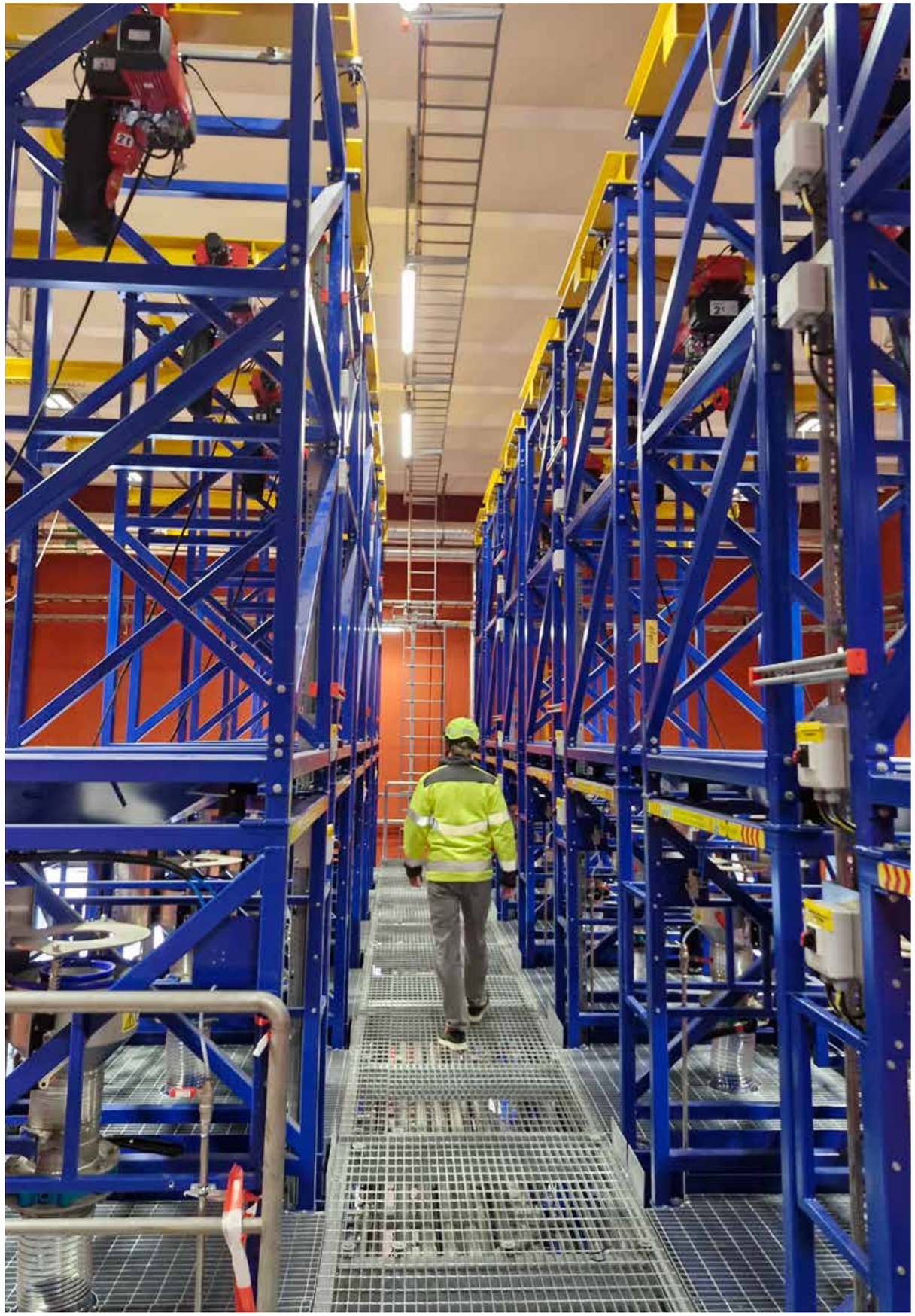
The system enables simple and controlled emptying of bulk bags without dust dispersion. The design ensures a safe working environment while maintaining a stable and efficient material flow throughout the entire process.

It is particularly well suited for handling materials such as granular polymers. The material is smoothly conveyed onward using a blower to external equipment or a silo, creating an integrated and efficient production solution.

The system is delivered with a built-in powder monitor for tracking the material level in the silo. Monitoring is managed via the control cabinet, providing full process control and contributing to increased operational r eliability and minimized risk of disruptions.

Advantages

- Compact, hygienic, and reliable operation
- Dust-tight silo with glove ports for bulk bag handlin
- Internationally proven design with many years of successful use



Polymer System ACP

The ACP polymer system produces a fully homogeneous solution, ensuring high quality, consistent concentration, and efficient dosing. Its unique design contributes to stable operation, reduced chemical consumption, and an automated process with high operational reliability.

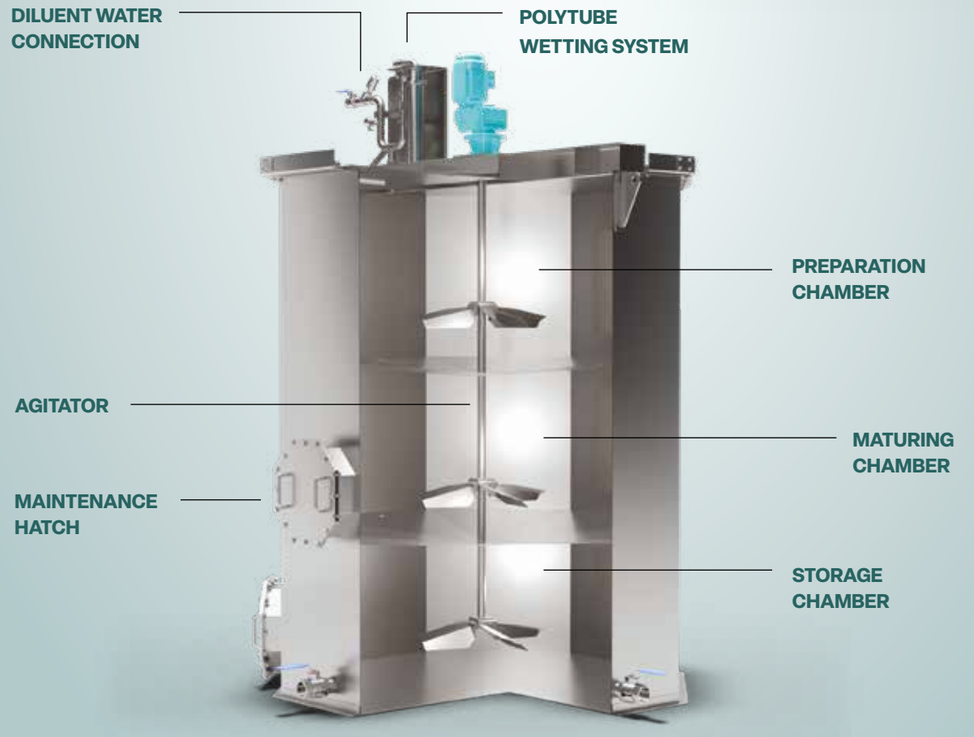
The ACP system features a unique and compact design that enables maximum capacity with just a single tank. The advanced three-chamber solution optimizes the mixing process and ensures that polymer and water are blended into a completely homogeneous solution.

Applications

The unit is suitable for a wide range of applications, including municipal wastewater treatment, industrial processes, biogas production, and aquaculture, where precise and consistent chemical dosing is essential.

Advantages

- Fully automatic operation
- Large maintenance hatches
- Mixers/agitator blades designed according to tank size and application
- Compact design



Dynamic Mixer AIM-D

With AIM-D dynamic mixer, sludge structure can be improved prior to the dewatering process by adding flocculants directly into the sludge stream with high mixing intensity.

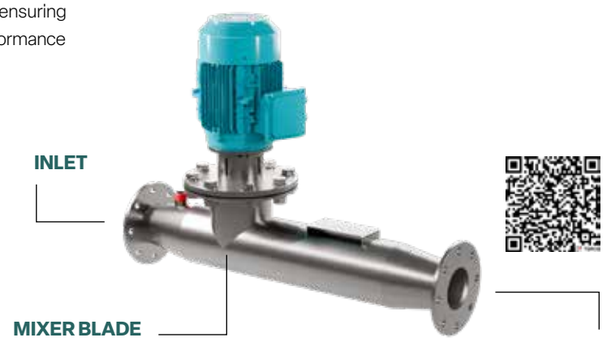
The AIM-D mixer combines low energy consumption with high efficiency, providing an effective and controlled mixing process. It is designed to maximize energy utilization while ensuring stable and consistent operation.

The entire unit is manufactured from stainless steel alloys ensuring high corrosion resistance, long service life, and reliable performance even in aggressive environments.

The mixer is well suited for biogas plants, the chemical and paper industries, as well as water and wastewater treatment plants. It can be used as a standalone unit or integrated with existing dewatering equipment to enhance overall plant performance.

Advantages

- Robust and low-maintenance design
- Manufactured in heavy-duty stainless steel
- 10–20% reduction in dosing; in some cases, the reduction can be significantly higher
- Higher drainage rate of the clear phase, leading to improved dewatering efficiency and the potential for higher dry solids content in the accept



Static Mixer AIM-S

The AIM-S static mixer combines smart design with efficient process technology, reducing chemical consumption by up to 25%. The result is an optimized flocculation process with lower operating costs and improved performance.

By optimizing the mixing of organic and inorganic flocculants, such as polymer, the mixer creates the right conditions for an effective and stable flocculation process. The flocculant is dosed directly before the mixer via a tangential injector ring with nozzles, quickly producing a homogeneous suspension.

The reaction starts immediately upon addition and is highly dependent on the energy and turbulence generated in the mixer. Controlled turbulence ensures rapid activation of the flocs, resulting in better dewatering and reduced chemical usage.

The static mixer can also be used to blend different media streams before chemical addition, providing increased process flexibility.

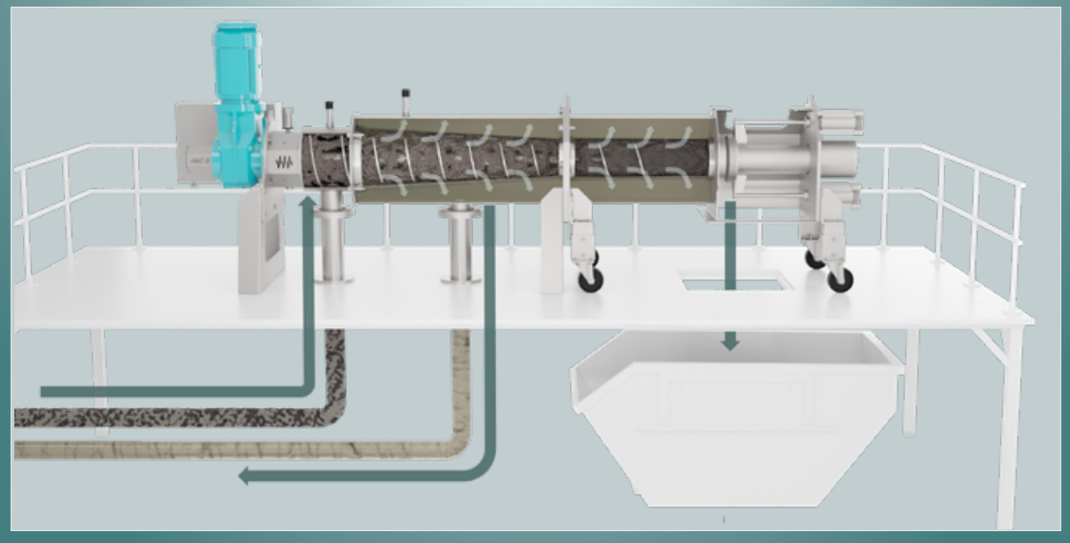
Installation can be horizontal or vertical. Four reinforced PVC hoses (1–2 meters, depending on placement) connect to the polymer distributor, included in the delivery from Autofric, and ideally positioned directly adjacent to the mixer.

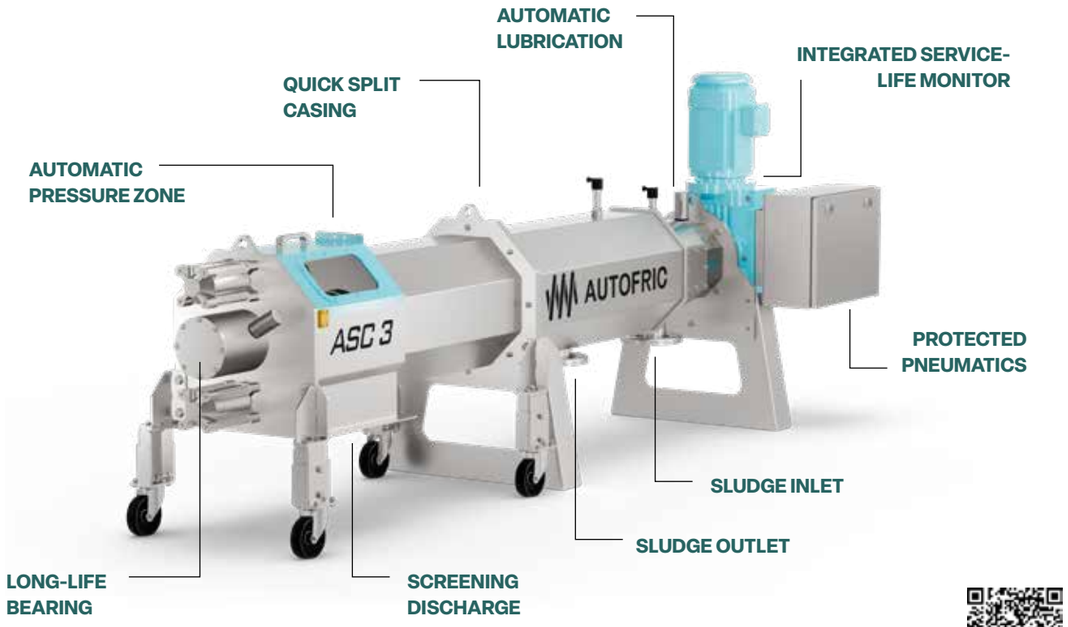
Advantages

- Easy installation
- Low maintenance costs
- Reduced polymer consumption >15%
- Consistent performance (even with high media volume)

SLUDGE SCREENING

Autofric offer energy-efficient in-line sludge cleaners designed to remove and dewater fibrous materials, debris, and solids from wastewater sludge, and industrial flows.





Sludge Cleaner ASC

The Autofric ASC is an energy-efficient in-line sludge cleaner designed to remove and dewater fibrous materials, debris, and solids from wastewater sludge, and industrial flows.

Autofric ASC' maintenance system continuously monitors equipment performance, helping prevent unexpected downtime, while rapid-access components make routine servicing quick and effortless.

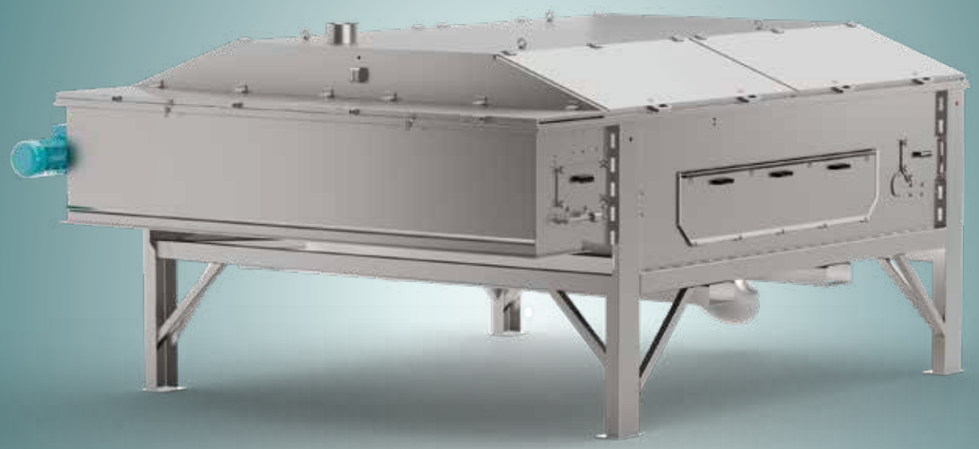
By combining robust construction with user-friendly design, the ASC ensures smooth, uninterrupted operation, giving you both peace of mind and lasting value.

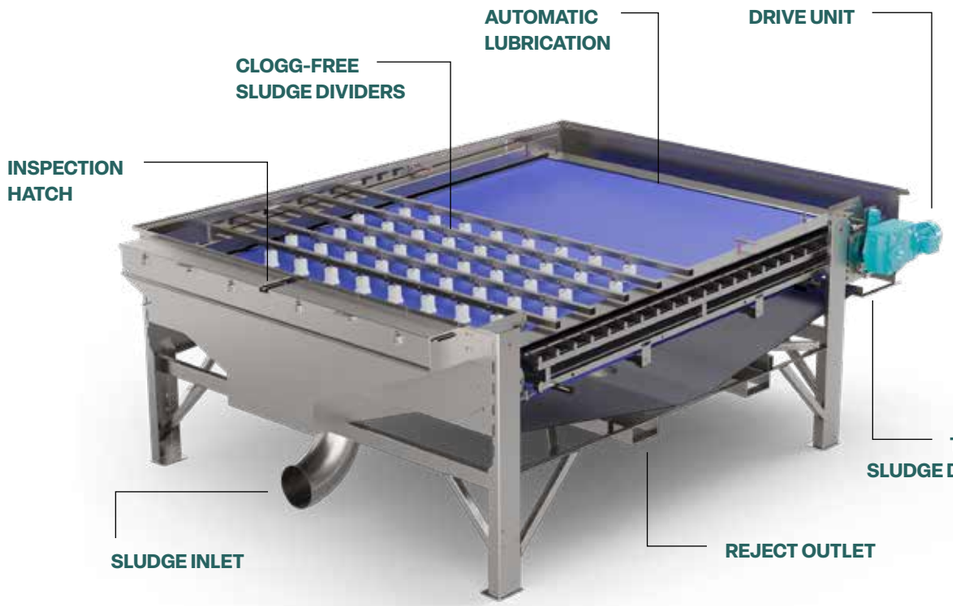
Advantages in brief

- **100% Stainless Steel Construction**
  Built with 304 or 316L stainless steel for maximum durability and corrosion resistance.
- **Engineered for extended service life**
  Low wear, maximizing cost-effectiveness over time.
- **Low Energy, High Efficiency**
  Delivers excellent throughput with minimal head loss during feed.
- **Waterless Operation**
  No wash water required, reducing operational costs and environmental footprint.
- **Adjustable Pressure Cone Zone**
  Enables increased dry solids without changing components
- **Maintenance & Wear Sensors**
  Smart monitoring ensures optimal uptime and process reliability.
- **Adaptive Flow Control**
  Automatically adjusts to changing feed conditions, ensuring stable performance.
- **Rapid Maintenance Access**
  Quick connectors reduce downtime and simplify service tasks.
- **Customizable Screening Apertures**
  Interchangeable screen/press zones available (3mm or 5mm Ø typical, other options on request).

THICKENING

With a focus on energy efficiency and operational reliability, Autofric offers high-quality solutions for screening and thickening sludge. The products are designed to efficiently separate, dewater, and reduce the volume of solids in both municipal and industrial facilities.





Sludge Thickener ABT

The ABT sludge thickener is an efficient and reliable solution for industrial and municipal facilities. It combines modern innovation with proven technology to meet high demands for both environmental performance and energy efficiency.

ABT is a fully enclosed system that serves as the first step in the dewatering process. It can be used as a standalone unit or integrated with equipment such as a screw press, belt filter, or centrifuge for a complete solution.

Separation of sludge and water is achieved through a combination of gravity and gentle static filtration. The process is designed to preserve sludge structure and prevent breakdown, ensuring high-quality thickened sludge.

The machine is available with various types of sludge scrapers, both rotating and static, optimized for efficient drainage. An adjustable sludge ramp at the end of the belt extends retention time and contributes to a higher solids content (TS).

The result is a compact, flexible, and high-performing thickener that provides stable operation and efficient sludge handling.

Process Desription

Sludge is first stored in a tank and then pumped into the process using a progressive cavity pump. Flow is adjusted as needed to ensure a consistent feed to the next step.

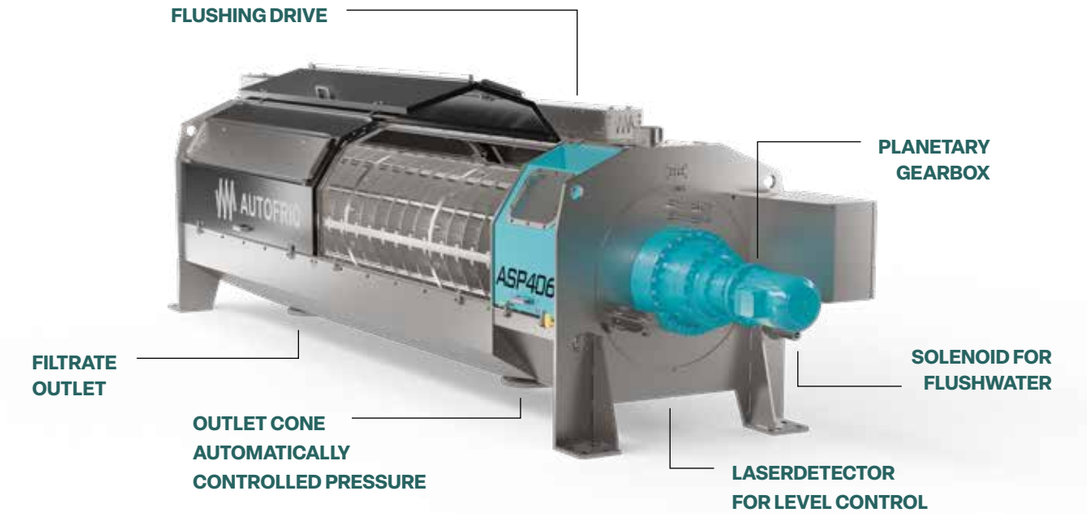
In the next stage, the sludge is thoroughly mixed with polymer, with dosing based on the sludge's properties and concentration. Mixing occurs in a mixer where the polymer reacts with the sludge to form flocs suited for further treatment.

The flocculated sludge is then fed to a dewatering table, where the liquid is separated from the solids. Drainage occurs via a belt filter using gravity, allowing solids to remain while water is removed.

Before leaving the belt, the sludge is slowed by an adjustable sludge ramp to extend drainage time and improve thickening. The entire process is designed for continuous operation and can run 24/7.

SLUDGE DEWATERING

State-of-the-art screw presses for dewatering sludge from wastewater treatment plants and industrial processes. The screw presses are available in various sizes and capacities to suit applications across most sectors.



Screw press ASP

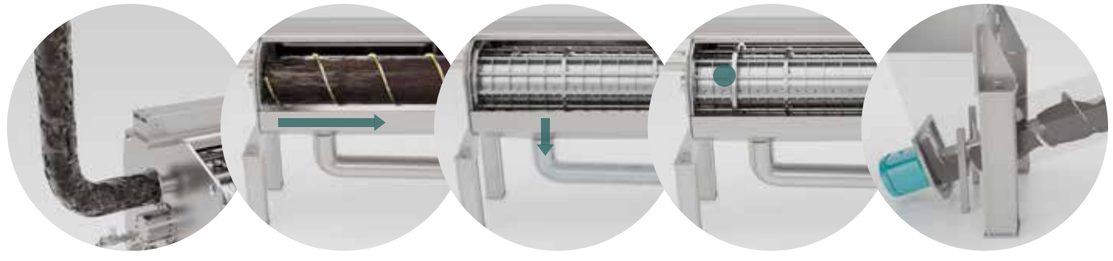
Autofric ASP is a high-performance, energy-efficient screw press for dewatering sludge from, for example, municipal treatment plants with an incoming TS content of up to about 5%.

Autofric ASP is built around a precision-manufactured stainless steel (304 or 316L) conical screw that rotates through multiple dewatering zones inside a dividable screen basket. The large dewatering area allows for thickening and dewatering in the same machine.

The machine's design, with a stable, fully enclosed chassis and few moving parts, makes it easy to handle. The press works quietly, vibration-free, and energy-efficiently with low wear and minimal maintenance needs, which contributes to a safe and hygienic working environment and a low operating budget.

The Autofric ASP has, compared to other alternatives on the market, significantly openable covers that facilitate service and maintenance. The screen basket is also electropolished, which prevents dirt from sticking to the surface and makes it easy to remove when flushing.

The surface treatment reduces the risk of clogging and reduced drainage area over time. The screen baskets are separable on all models to facilitate access for servicing.



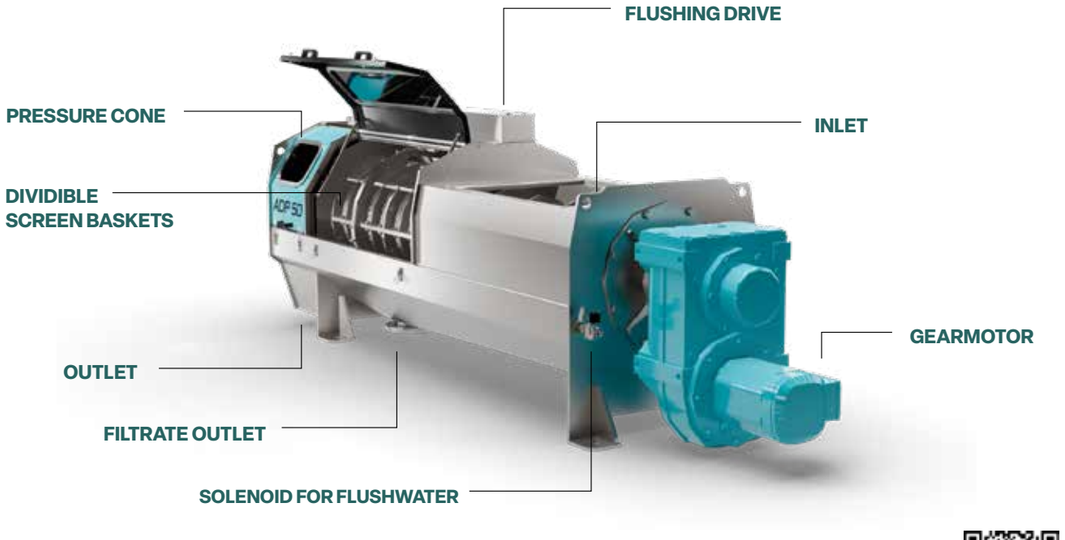
1 Flocculated sludge with a high water content enters the machine.

2 The spiral presses the sludge forward.

3 The water is separated from the sludge through the sieve.

4 The spraybar cleans the sieve intermittently when needed.

5 The dewatered sludge exits the press and is conveyed to temporary storage.

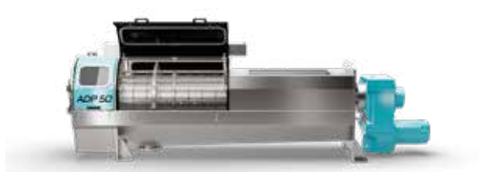


Screw Press ADP

Autofric ADP is a high-performance screw press for dewatering of industrial material but also for various sludge dewatering in, for example, municipal wastewater treatment plants with higher incoming DS content. The screw press is designed with a screw in stainless steel that rotates inside a dividible screen basket through several dewatering zones

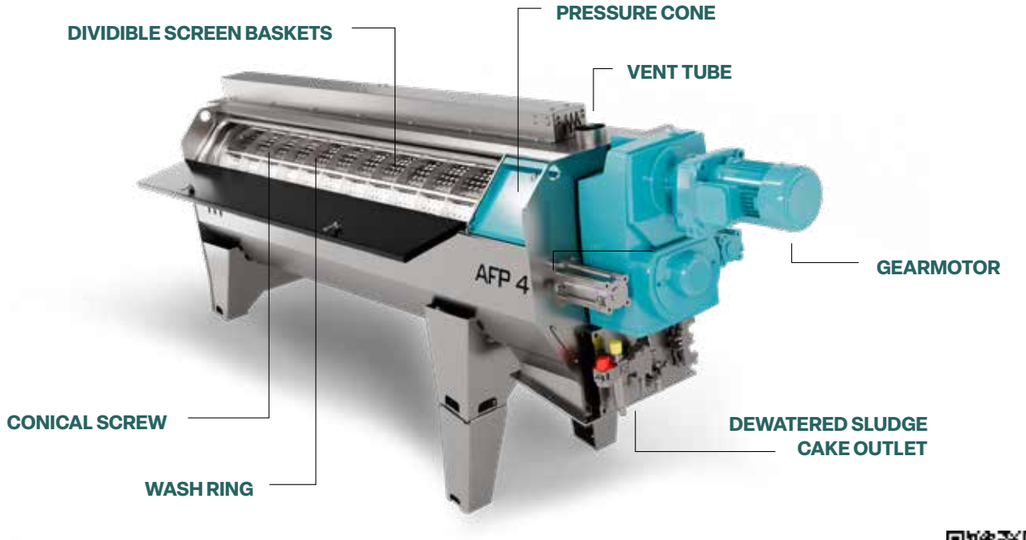
Autofric ADP – advantages in short

- All materials in stainless steel, 304 or 316L
- Heavyduty design for maximum dewatering performance
- Fully automatic, self-cleaning screw press, for continuous sludge dewatering
- No bearings that the spiral wears against, resulting in low wear and tear and enabling self-cleaning as the spiral comes close to the surface to be cleaned
- Quiet, vibration free operation due to low RPM
- Low energy consumption that is optimized with VFD operation, and low water consumption
- Screen basket in a split design for easy maintenance and service
- Fully enclosed design, gives a safe and hygienic work environment
- Designed and produced in Sweden



Autofric ADP50

Autofric ADP50



Screw Press AFP4

Autofric AFP4 is a energy-efficient screw press for dewatering of sludge. The model is specially developed to efficiently dewater smaller volumes of sludge with its simple yet effective design. AFP4 is equipped with a conical screw in stainless steel that rotates through multiple dewatering zones inside a dividible screen basket.

Autofric AFP4 – advantages in short

- All materials in stainless steel, 304 or 316L
- Large dewatering surface enables thickening and dewatering in one machine
- Fully automatic, self-cleaning screw press, for continuous sludge dewatering
- Low energy consumption that is optimized with VFD operation, and low water consumption
- Quiet, vibration free operation due to low RPM
- The slow rotating screw demands a minimum of maintenance, and wear are kept low
- Screen basket in a split design for easy maintenance and service
- Fully enclosed design, gives a safe and hygienic work environment
- Designed and produced in Sweden

Autofric AFP4

Autofric AFP4

CONVEYING

Autofric offers customized screw conveyors for a wide range of applications, such as industry, agriculture, food production, and biofuel handling. In addition, we also provide screw segments, conveyor screws, and a wide range of accessories that complement and optimize our solutions.

SCREW CONVEYORS

Autofric offers customized screw conveyors for a wide range of applications, such as industry, agriculture, food production, and biofuel handling. In addition, we also provide screw segments, conveyor screws, and a wide range of accessories that complement and optimize our solutions.

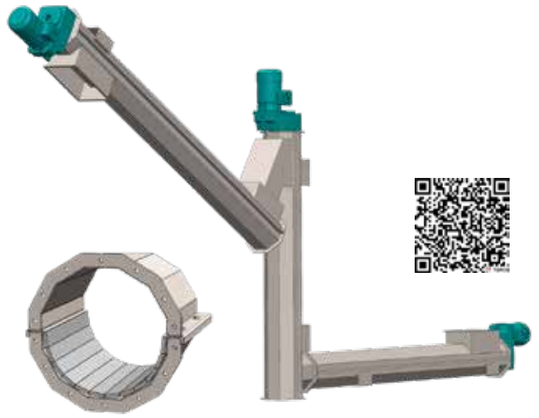
Type-E conveyor

Autofric Type-E is an innovative and effective solution for material transport in industries such as paper- and pulp mills, metal industry and waste.

Type-E, our latest model of screw conveyor, has troughs with bent edges that enclose the spiral, further increasing efficiency.

The Type-E offers high energy efficiency and supports both horizontal and vertical transport. With flexible solutions for inlets, outlets, and transitions, it is suitable for a wide range of applications.

Tube troughs are primarily used for feeding and lighter materials, with options for inspection hatches. For outdoor installations, the conveyor can be equipped with frost protection and insulation. Depending on the material, either shaftless or shafted spirals are used.

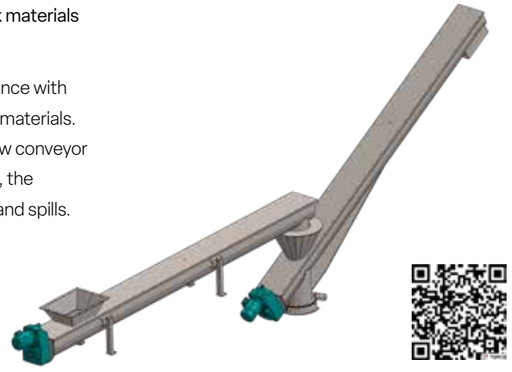


U-screw conveyor

Autofric's U-screw conveyor is the ultimate solution for conveying bulk materials in multiple applications and installations.

The U-screw conveyor, our very first model, combines proven performance with modern innovation. The ultimate choice for horizontal transportation of materials. With its shaftless design and large buffer volume in the trough, the screw conveyor can handle large amounts of material without interruption. Furthermore, the encapsulated design allows for a dust-free environment without odors and spills.

The U-screw conveyor is the perfect solution for a wide range of applications and installations. Typical uses include wastewater treatment plants, industrial facilities, agriculture, food production, and biofuel handling.



Usage

- Loading and lifting
- Feeders
- Mixing products
- Heating/Cooling
- Drying

Areas of application

- Pulp and paper industry
- Biomass combustion
- Metal industry
- Waste management
- Chemical industry
- Food industry
- Agriculture

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