



WEDGE WIRE & PERFORATION

**COMPONENTS FOR
WATER EXTRACTION
AND SEPARATION**

WATER TREATMENT AND RECYCLING

ANDRITZ

ENGINEERED SUCCESS

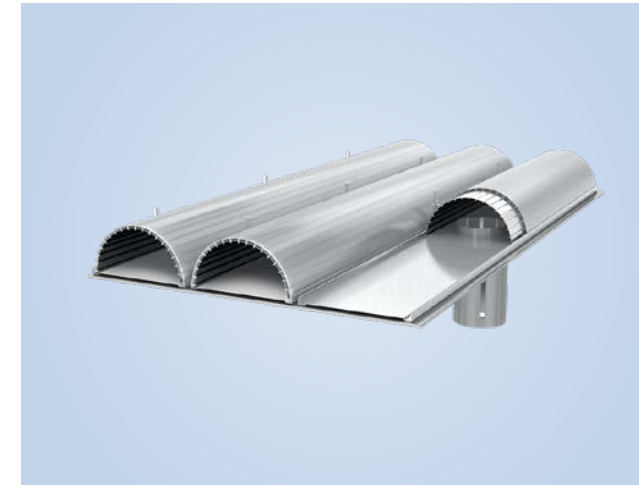
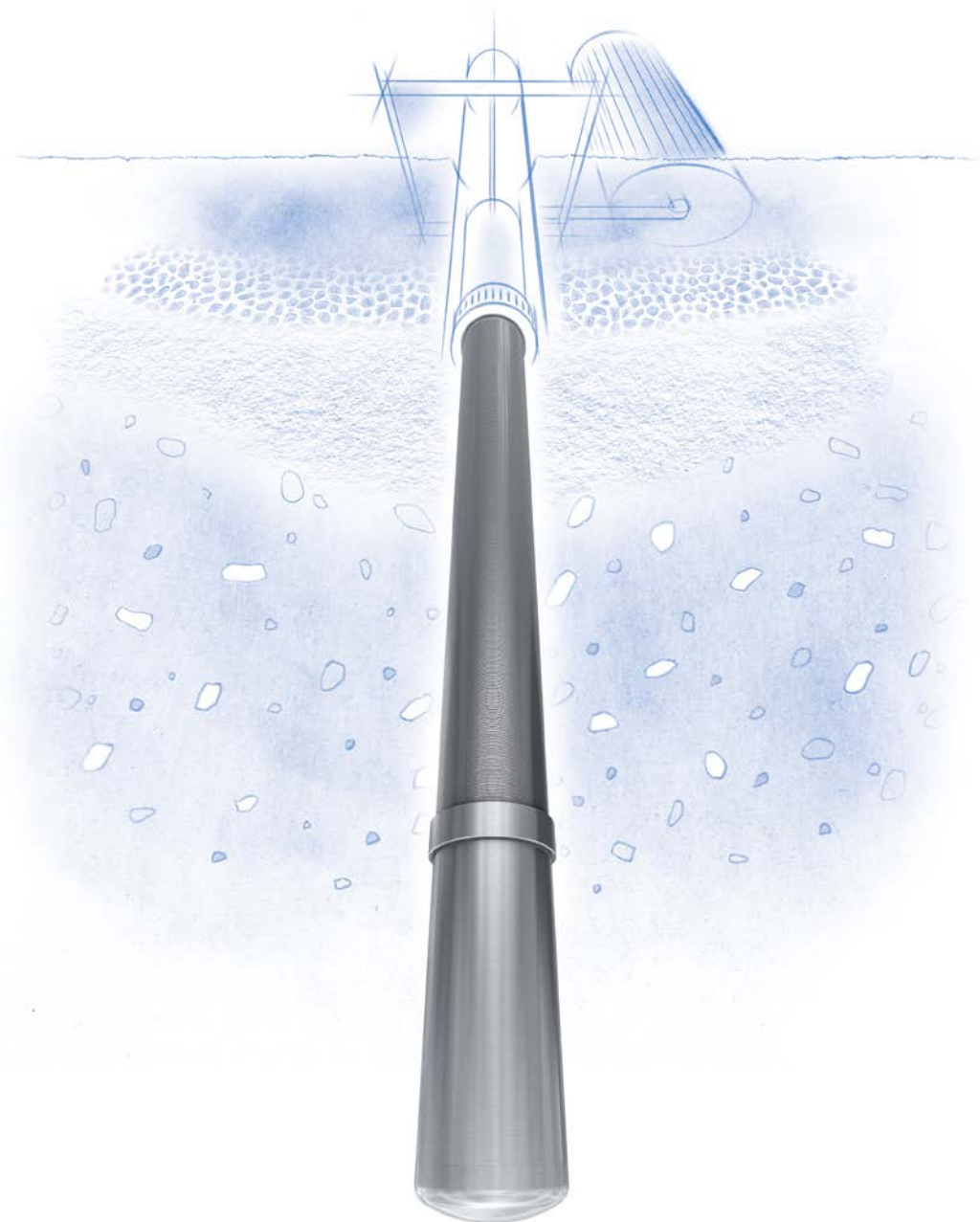
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Drinking water

Screens for the extraction of drinking water

Water is a precious resource. The processing of drinking water must be done in strict compliance with laws for water purity and environmental protection. ANDRITZ takes international and local standards into account when designing and manufacturing screens and filters for drinking water applications. Wedge wire technology, with its large open area and consistently repeatable slot openings, is ideal for screening water intake (passive and ground water) and for use

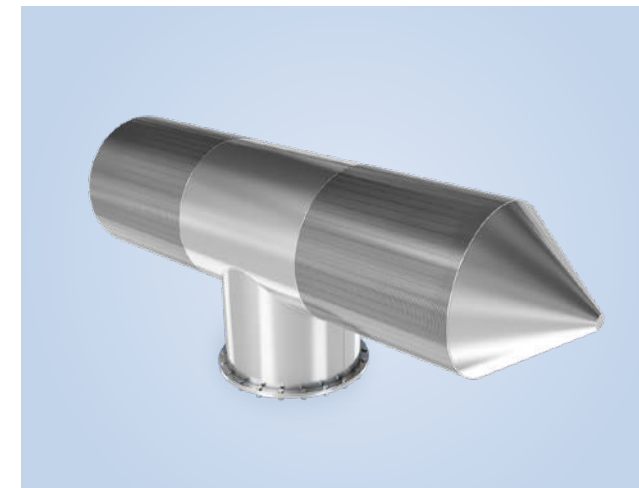
as underdrain sand filters in water processing plants. Materials of construction for screens, gaskets, and other components are in compliance with regulations. ANDRITZ, with its 20+ years of experience producing high-quality wedge wire screens for separation processes, has specialists at hand for engineering, applications, and project management to support you in the successful completion of any project.



UNDERDRAIN FILTERS

Gravitary filters by ANDRITZ are a cost-effective and stable solution for filtration plants. Its main purpose is to maintain filtering media (sand, activated carbon, etc.), drain filtered water and ensure good and even distribution of air and water during backwash phases.

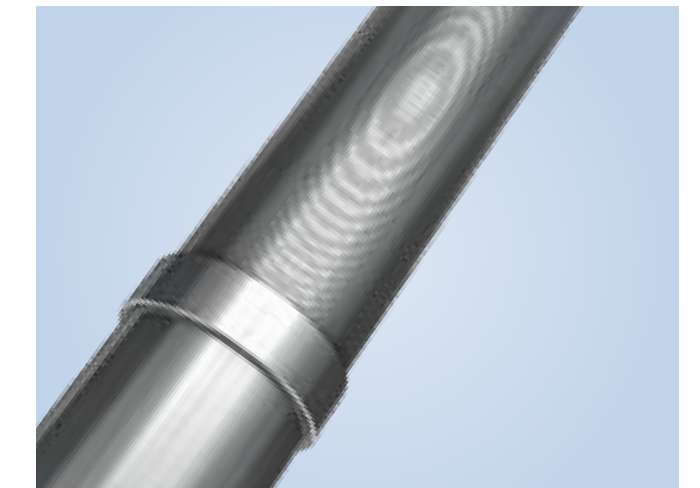
- High open area for an optimized filtration cycle
- No maintenance needed
- Very strong construction



PASSIVE WATER INTAKE SCREENS

A passive water intake system is an environmental friendly solution for water abstraction specially designed to protect aquatic life and meet fish protection regulations, such as the European Eel Directive or EPA regulations. Passive intake screen systems are completely customized to meet your requirements for the extraction of water, no matter if you want to extract from lakes, oceans (desalination), rivers or underground springs. Considering your project specification ANDRITZ engineers will provide a design totally adapted with:

- Low impact on wild life and environment
- Limited maintenance cost due to special V-shaped wire
- A totally welded structure and therefore high durability



WATER WELL SCREENS

ANDRITZ delivers water well screens for both major applications: Wedge wire well screens for shallow water as well as a reinforced version for deep water wells. When compared to conventional slotted pipes, ANDRITZ water well screens have superior open area due to their continuous slot opening.

- Reduced energy consumption and increased water flow
- Reduced erosion of entry surfaces and increased well life
- A uniform and efficient well development
- No pump damage due to avoided risk of contaminants

Desalination

Non-corrosive screens for the extraction of sea water

All types of water can be produced from a desalination plant – from irrigation to process water to drinking water or ultrapure. One of the main challenges in designing and manufacturing components for desalination projects is the correct choice of metal alloys to withstand corrosive salts. In addition, knowledge and experience with reinforcement techniques for seismic areas or installations with strong wave actions is important. ANDRITZ has this expertise in-house. Using

a computer-assisted simulation program, specialists can ensure the perfect choice of alloy, the correct strength properties, and ideal flow rates. A water intake screen can be packaged with an air backwash system (located as far as 2 km from the screen itself) to eliminate plugging and fouling of the screen. ANDRITZ specialists are always available for engineering, design, and project management as needed to support you during any desalination project.



PASSIVE WATER INTAKE SCREENS

Passive water intake system is an environmental friendly solution for water abstraction specially designed to protect aquatic life and meet fish protection regulations, such as the European Eel Directive. Passive intake screen system are completely customized to meet your requirements for the extraction of water, no matter if you want to extract from lakes, oceans (desalination), rivers or underground springs. Considering your project specification ANDRITZ engineers will provide a design totally adapted with:

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AIR BACKWASH SYSTEM

Air backwash systems are often used in open water or sea water with organisms which could possibly plug the screen of passive water intake screens. Heavy growth of algae and other plants (fouling) as well as settlement of mussels and other marine organisms can be prevented by an air blast on a regular basis. In specially demanding environments, a small amount of chlorine can be added to decrease the risk of fouling.

- Range of up to 2 km (1.25 mi)
- Prevents bio-fouling and maintains steady operation
- Prevents pressure drops and maintains steady water flow

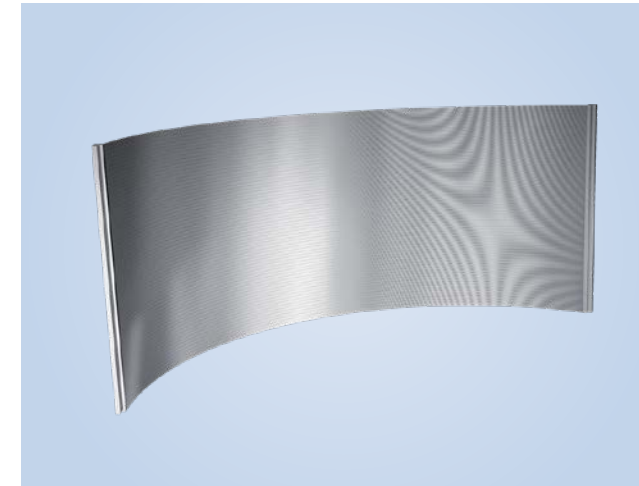
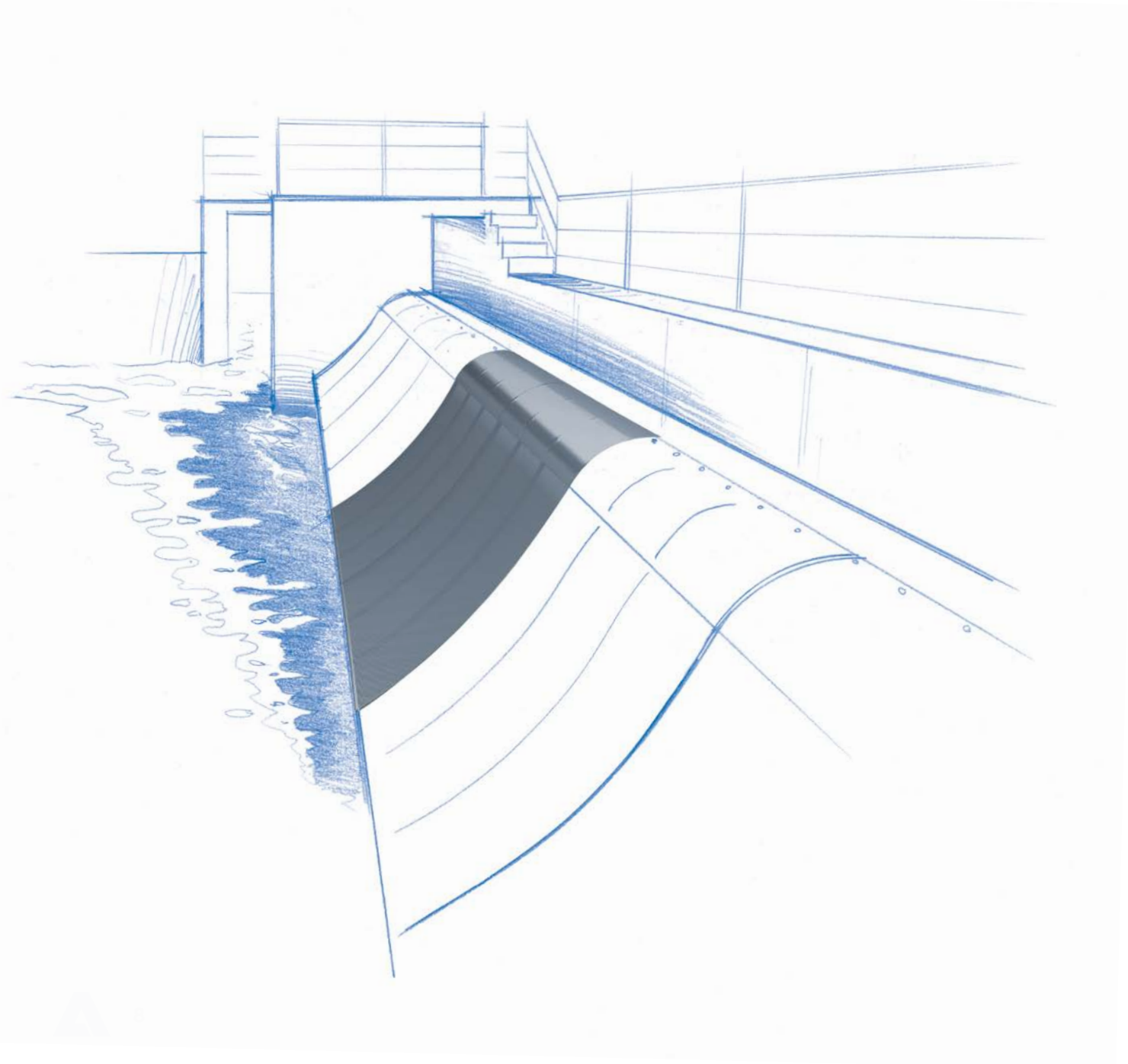


Power plants

Safe retention of impurities in cooling water

Conventional power plants and hydropower plants require durable equipment for water intake and processing – equipment designed for long life, continuous operation, and ease of maintenance. ANDRITZ is experienced in providing complete packages: water intake screens, piping, manifolds, and air backwash systems as required. The wedge wire intake screens (passive and coanda designs) are capable of high

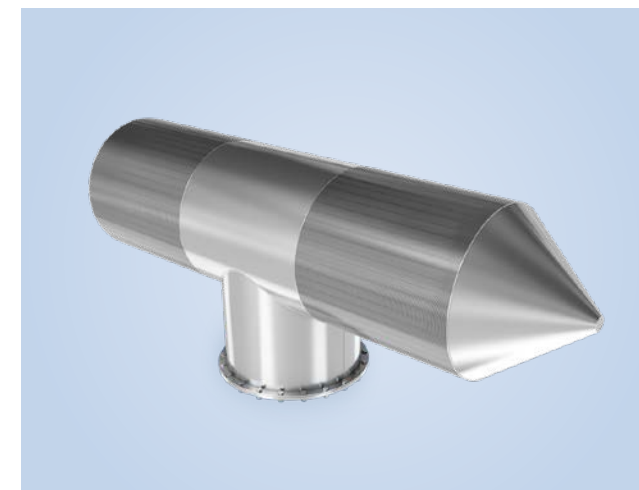
volume extraction of water, but at slow flow rates to enable debris and fish to pass over in compliance with environmental and wildlife protection regulations. In addition, ANDRITZ resin traps, long favored by experienced operators, prevent the possibility of ion exchange or filter media from a water treatment system from contaminating downstream processes or equipment.



COANDA SCREENS

ANDRITZ coanda / bow screens are made of stainless steel or copper-nickel alloys, depending on the area of application. The stable and sturdy construction ensures low maintenance and a high lifetime expectancy. ANDRITZ Coanda / Bow screens can be manufactured in nearly all sizes and slot widths, for a safe water filtration in every application.

- High lifetime due to special alloys
- Maintenance-free in most applications
- Very precise slot tolerances



PASSIVE WATER INTAKE SCREENS

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- A totally welded structure and therefore high durability



RESIN TRAPS

Resin traps are safety devices used in ion exchange units, water systems, activated carbon, and media filters. Reliability and strict slot tolerances are important factors for resin traps used in reactor plants, as escaped media from the treatment vessel can damage the following pumping equipment. ANDRITZ resin traps can be designed to capture media particles of any size, while keeping slot tolerances as low as possible. For a safe and reliable process.

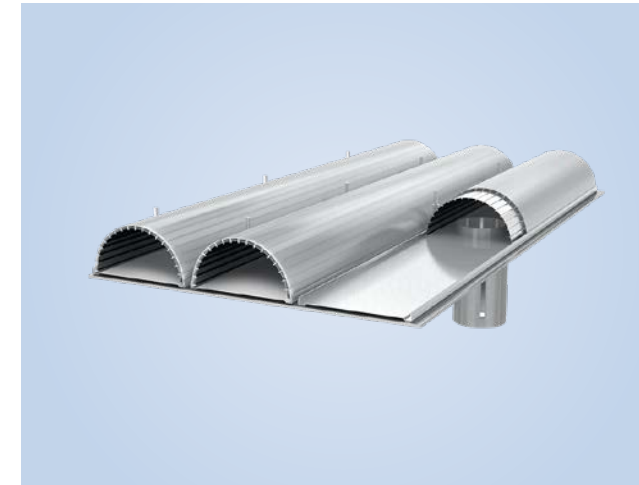
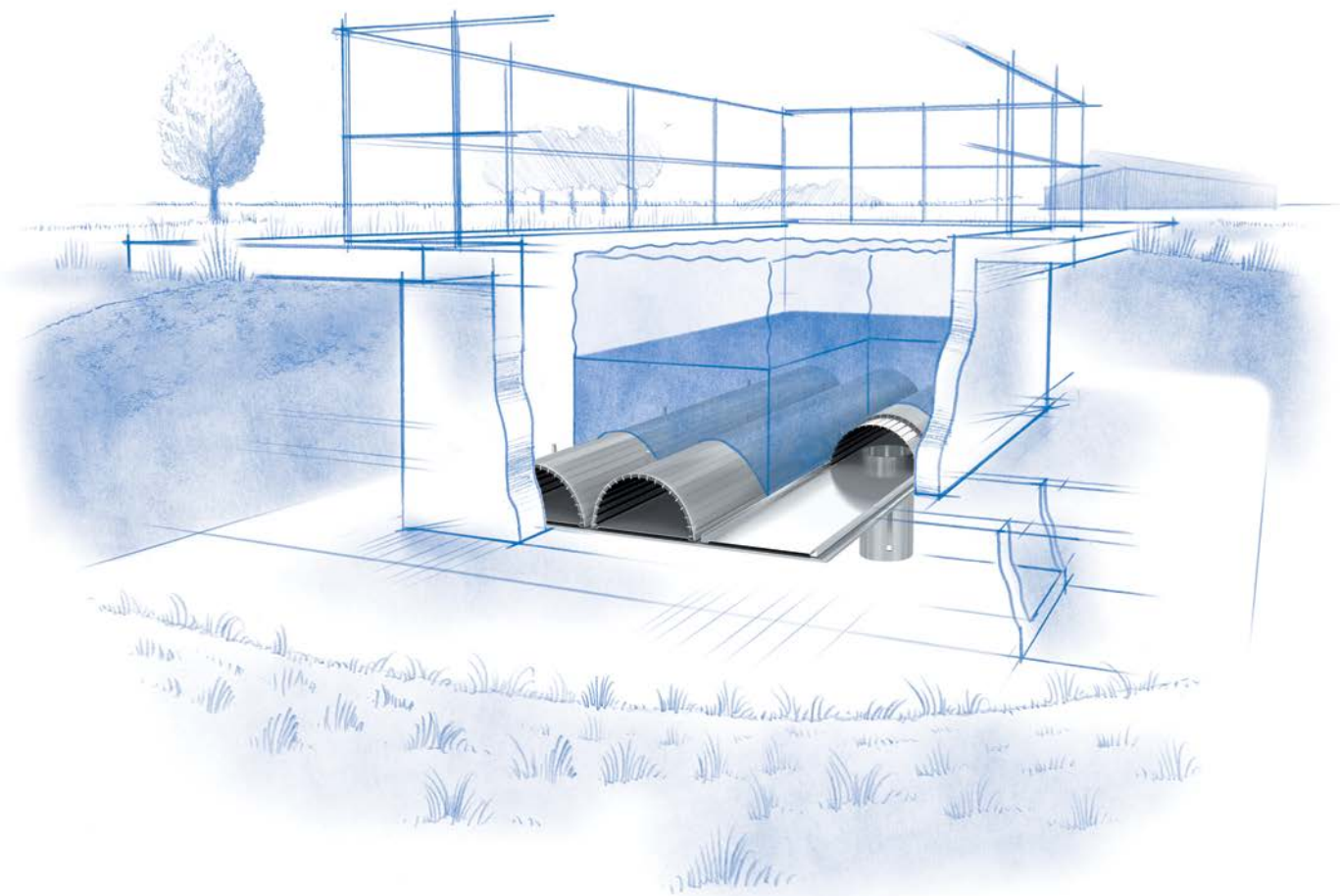
- Large open area for a high throughput
- Very stable construction
- Designed to withstand high differential pressure

Process water

Extraction and distribution with finest slot widths

The utilization of water in industrial processes is very often critical to quality of the end product and the cost-effective operation of the plant. Generally, the effluent from one process is suitable for use in another, if properly treated. Industries such as pharmaceuticals, food processing, and chemicals have stringent requirements for purified water. ANDRITZ has 20+ years of experience and the process expertise to provide filters, components, and collection/distribution

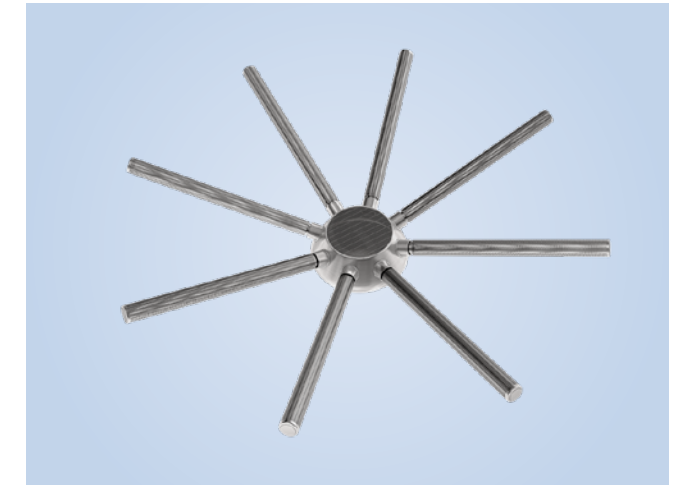
systems for these industries. Quite often, the components are supplied to screening vessel manufacturers, but are also available directly as replacement parts or upgrades to existing equipment. In addition to wedge wire designs, ANDRITZ utilizes drilled and milled designs for filtration and separation applications – allowing its specialists to provide you with expert advice for a wide range of application solutions.



UNDERDRAIN FILTERS

Gravitary filters by ANDRITZ are a cost-effective and stable solution for filtration plants. Its main purpose is to maintain filtering media (sand, activated carbon, etc.), drain filtered water and ensure good and even distribution of air and water during backwash phases

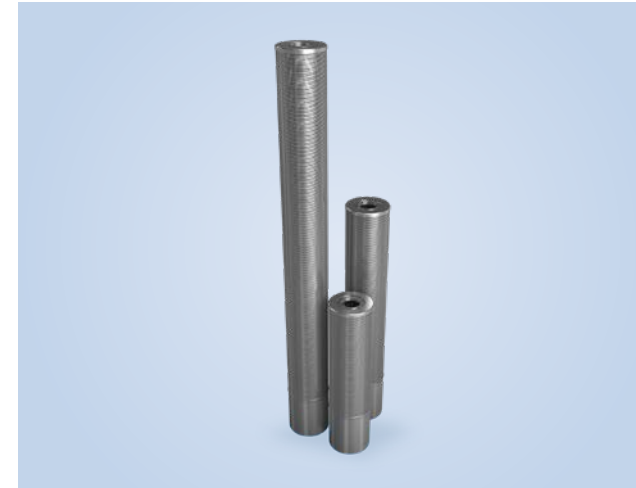
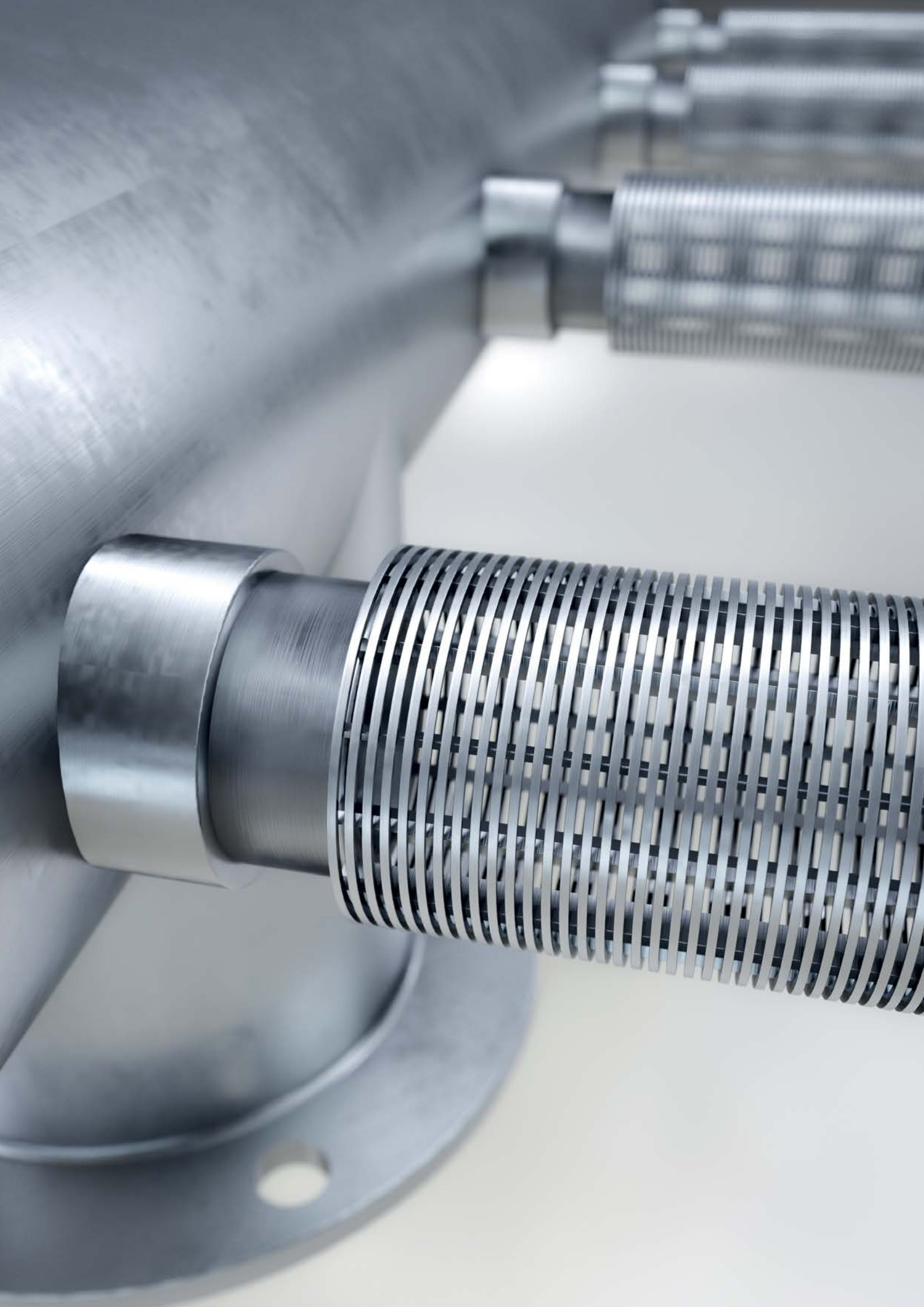
- High open area for an optimized filtration cycle
- No maintenance needed
- Very strong construction



DISTRIBUTORS/COLLECTORS (HEADER AND LATERALS)

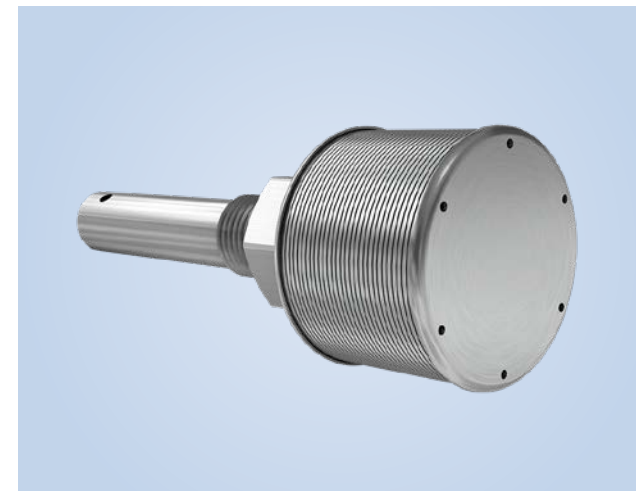
A collector/distributor uses a header pipe or a hub to which several screen tubes are attached. They enable excellent collection or distribution of liquid within a medium without wall effects or channelling in order to maximize efficiency. Each lateral can be mounted on perforated pipes in order to optimize both mechanical resistance as well as efficiency with calibrated holes.

- Optimized for each type of application
- Strict slot width tolerances
- High efficiency



CANDLES FOR AUTOMATIC BACKWASH FILTERS
Candle filters are used in many different industries, for example the food industry or in the production of beverages. They can be used in the preparation of process water, as well as to filtrate beverages or vis-ous products like jelly. In order to attain a consistent final product, very precise slot widths are mandatory.

- Perfect circularity for a perfect final product
- Very precise slot widths
- Adaptable to fit your process



NOZZLES

Nozzles filter liquid or gas while retaining the filtration medium (sand, catalyst, resin, zeolite, activated charcoal, etc.). Nozzles constitute an excellent economic compromise in combining the benefits of a completely welded structure to withstand very high stress while providing an anti-clogging surface and excellent corrosion resistance.

- High open area for an optimized filtration cycle
- No maintenance needed
- Very strong construction



RESIN TRAPS

Resin traps are safety devices which prevent the infiltration of resins and solids into the pipe system. They are often used in ion exchangers and activated carbon systems and protect the downstream equipment like pipe systems, pumps and heat exchangers. ANDRITZ resin traps have a very high slot width accuracy and a permanent availability for a non-disruptive process.

- Fine filtration as low as 50 μm
- Anti-clogging surface
- Suitable for heavy-duty applications

Waste recycling

Spare parts for waste recycling machines in OEM quality

The recycling and reuse of waste makes excellent environmental and economic sense. When the challenge is to remove water or liquids from waste materials and/or to separate different types or densities of materials before further processing or transport, ANDRITZ has solutions. Several different designs (milled, drilled, wedge wire) can be employed for a variety of different recycling operations: municipal sludge, agricultural wastes, the recycling of plastics

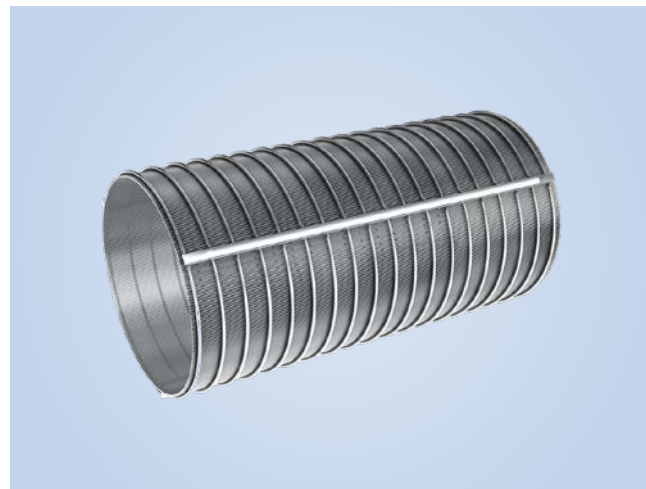
and glass, etc. Screw press baskets and separator baskets from ANDRITZ are extremely durable to ensure long life. Large open area, adherence to tight tolerances, and repeatable accuracy of the slots contribute to higher throughput with a lower pressure drop. The baskets are also easy to clean. ANDRITZ specialists can assist you in specifying and installing the correct basket for a wide range of OEMs.



SCREW PRESS BASKETS

ANDRITZ offers a wide range of screw press baskets for all major screw presses. Besides high-quality replacement baskets, ANDRITZ also manufactures alternative design variants for a longer lifetime and optimized flow rates. Grooved liners can be added to avoid stock rotation for an even pulp transportation through the press. A split solution offers the possibility of adjustment of the gap.

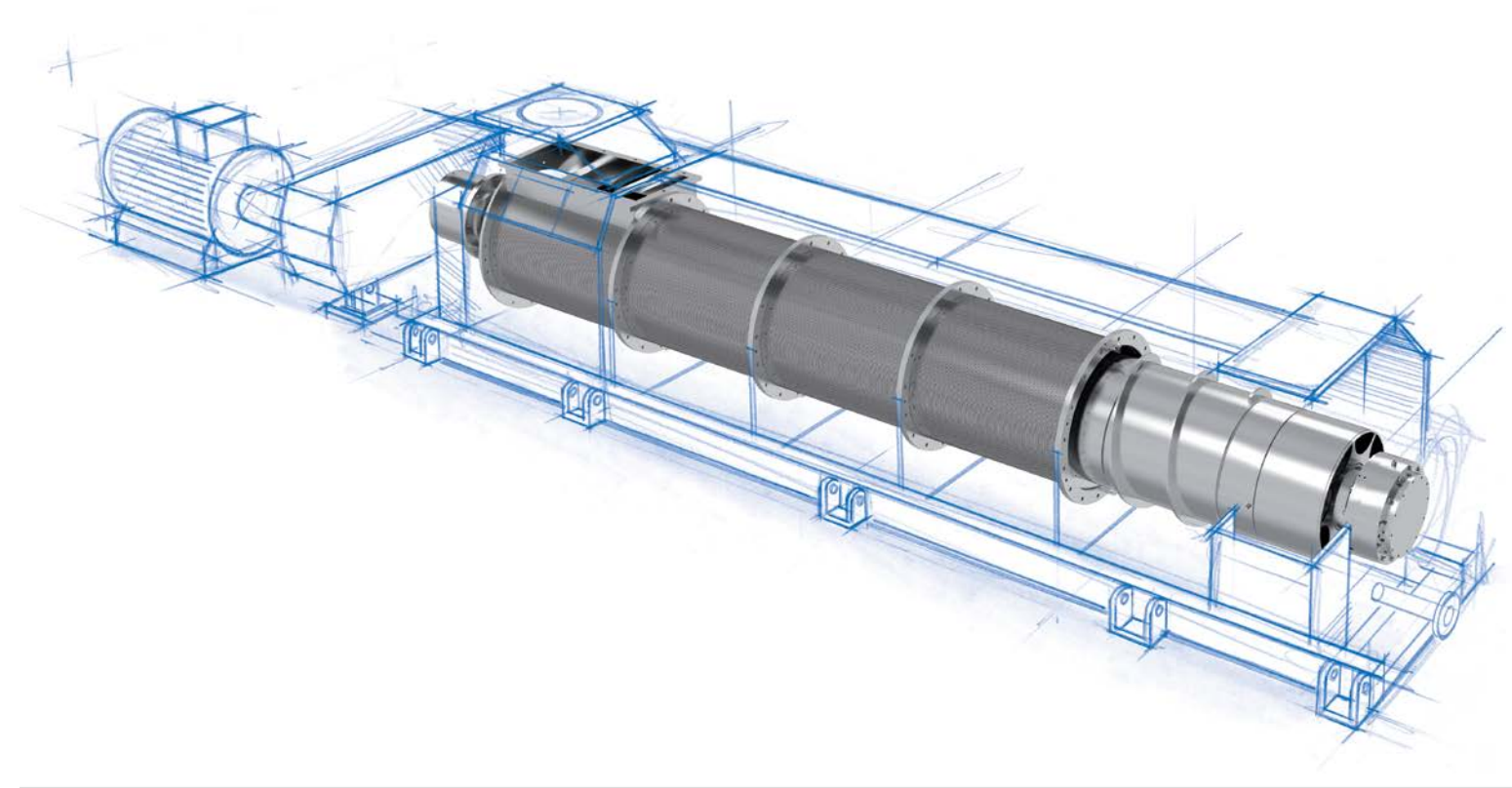
- Large open area for better dewatering
- Easy maintenance
- All kinds of manufacturing technology possible



SEPARATOR BASKETS

Viscous media are pressed in screw separators so as to increase the solid portion up to 35%. In general, the following applies for these processes: the higher the solid portion, the more efficient and less energy-consuming the following process step is.

- Large open area
- Less clogging tendency due to V-shape of profile wire
- High accuracy of shape and fit

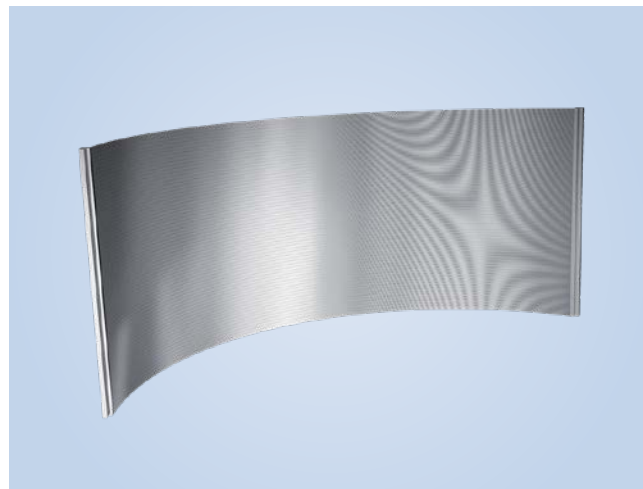


Waste water treatment

Reliable separation of solids and liquids

The goal of any wastewater treatment operation is to remove as much of the suspended solids as possible from the water before the water is further processed or discharged back to the environment. ANDRITZ supplies filtration components (screens, baskets, candles) to major OEMs, and can in turn supply replacement parts or upgraded components directly. Perforated and wedge wire screens have slot widths as small as

50 µm. The precision and repeatable accuracy of the slots contribute to excellent screening efficiency and consistent operation. Coanda screens are capable of high volume extraction of water, but at slow flow rates to enable debris and aquatic animals to pass over. Candle-shaped filters are available for a variety of automatic backwash filters. All components are extremely durable to ensure a long, productive life.



COANDA SCREENS

ANDRITZ coanda / bow screens are made of stainless steel or copper-nickel alloys, depending on the area of application. The stable and sturdy construction ensures low maintenance and a high lifetime expectancy. ANDRITZ coanda / bow screens can be manufactured in nearly all sizes and slot widths, for a safe water filtration in every application.

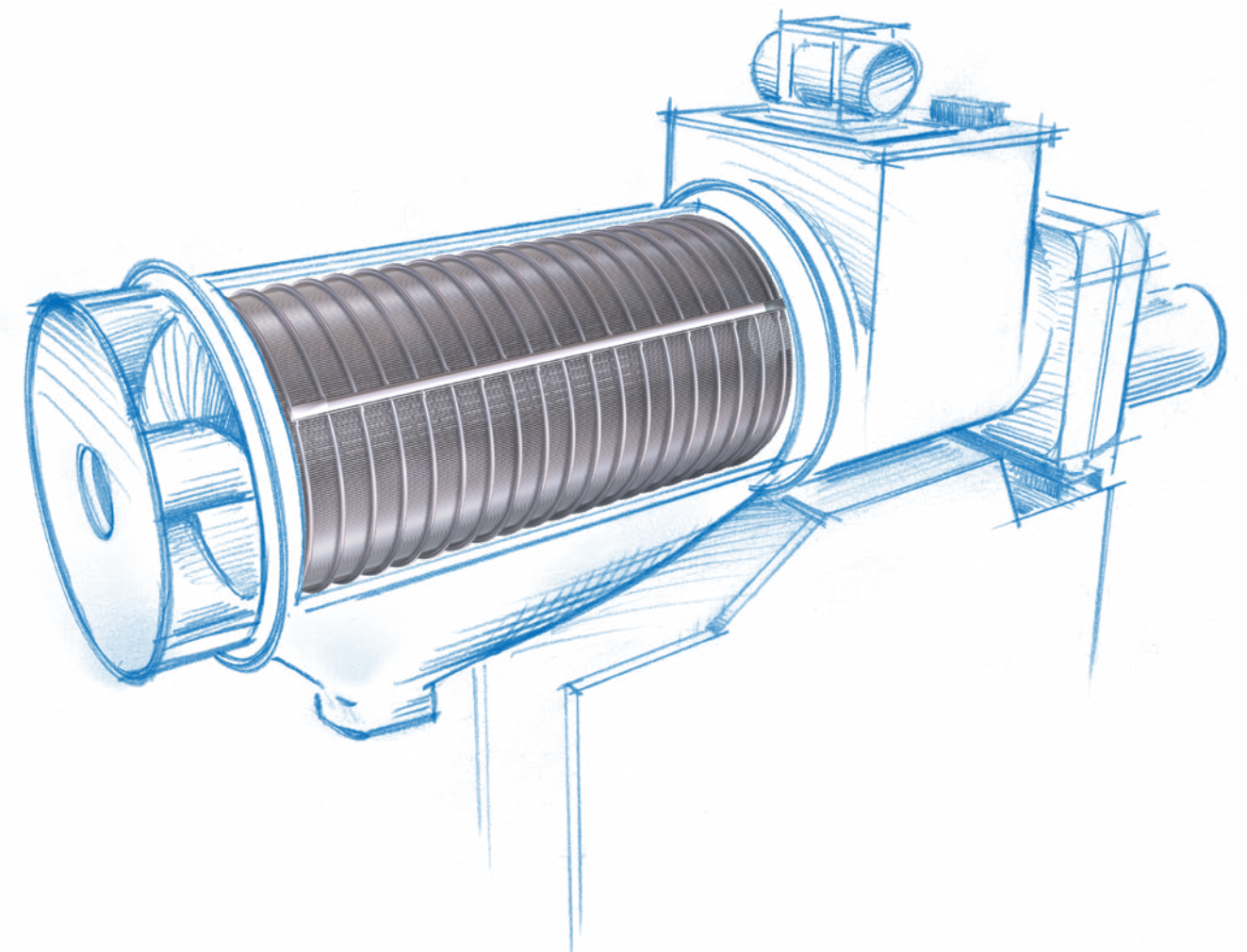
- High lifetime due to special alloys
- Maintenance free in most applications
- Very precise slot tolerances

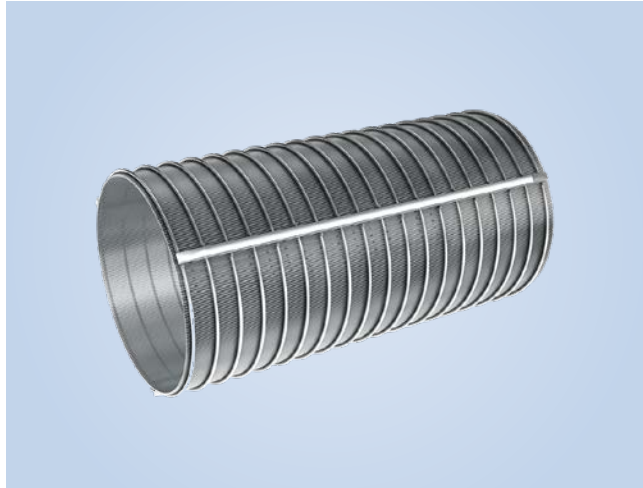


SCREW PRESS BASKETS

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- Large open area for better dewatering
- Easy maintenance
- All kind of manufacturing technology possible



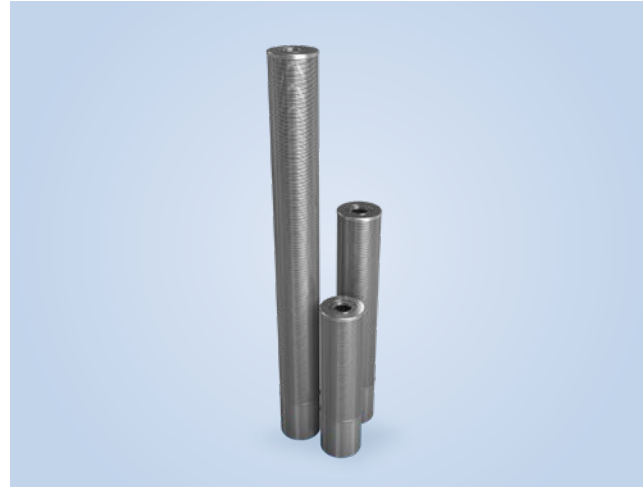


SEPARATOR BASKETS

Viscous media are pressed in screw separators so as to increase the solid portion up to 35%. In general, the following applies for these processes: the higher the solid portion, the more efficient and less energy-intensive the following process step is.

Optimized baskets from ANDRITZ provide:

- Large open area
- Less clogging tendency due to V-shape of profile wire
- High accuracy of shape and fit



CANDLES FOR AUTOMATIC BACKWASH FILTERS

Candle filters are used in many different industries, for example the food industry or in the production of beverages. They can be used to filtrate beverages or viscous products like jelly, as well as used in the preparation of process water. In order to attain a consistent final product, very precise slot widths are mandatory.

- Perfect circularity for a perfect final product
- Very precise slot widths
- Adaptable to fit your process



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