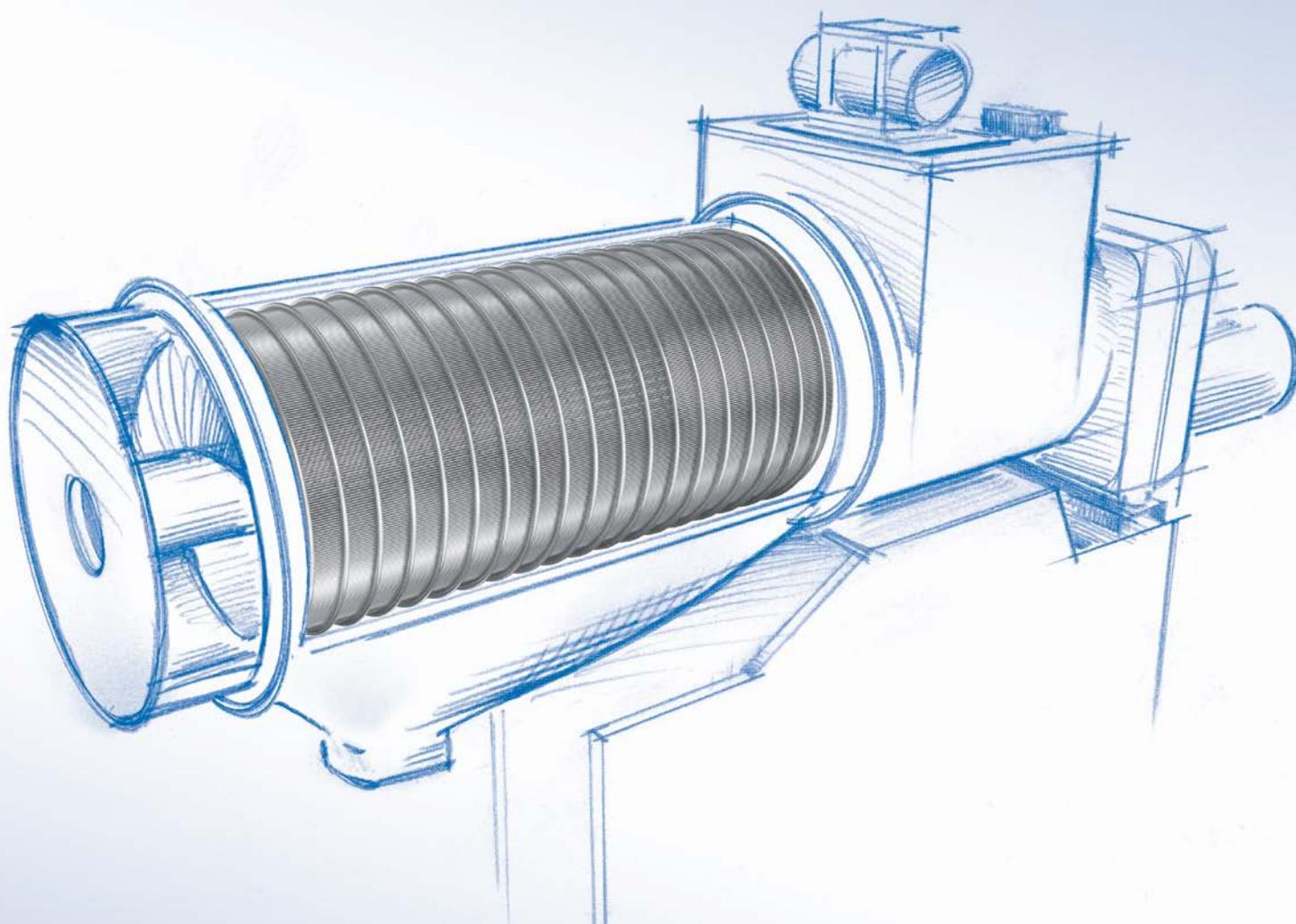
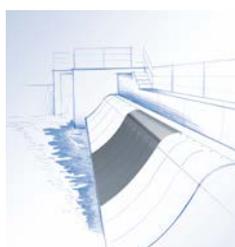


Wedge Wire Screen Technology

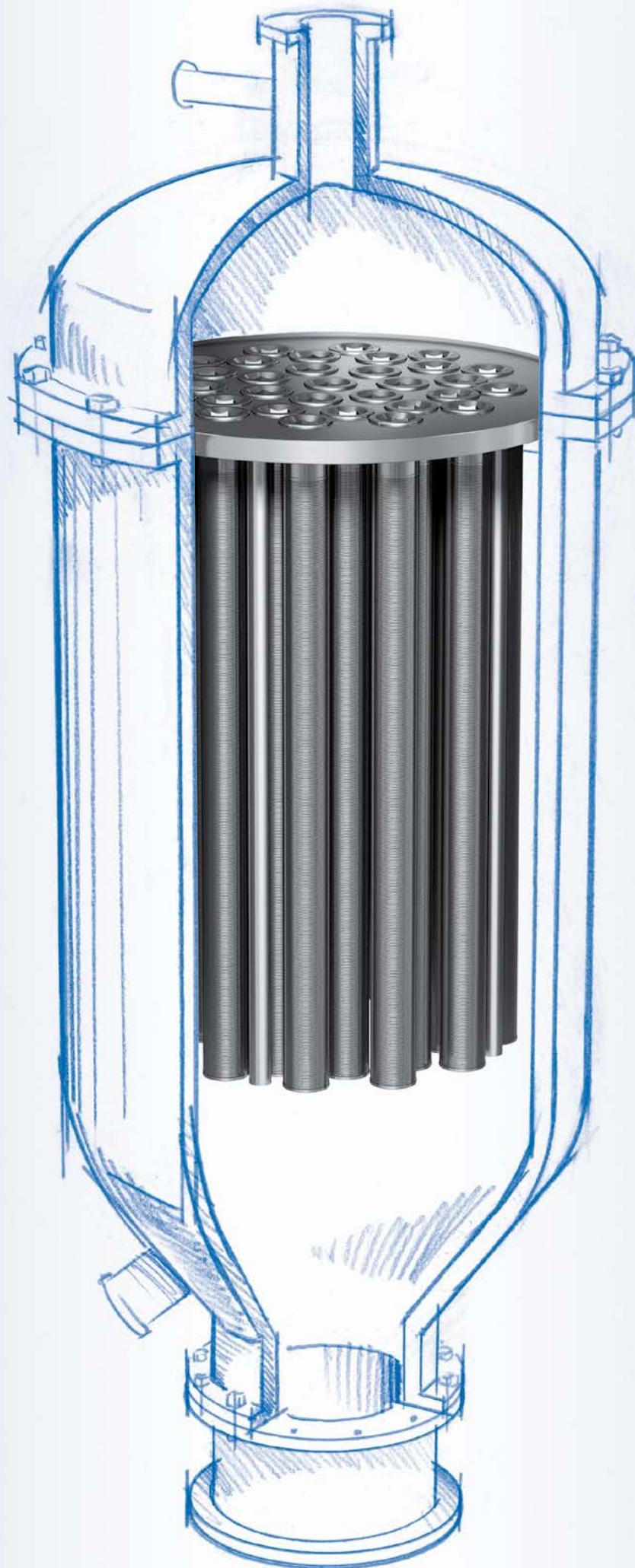
For demanding screening and separation processes





Contents

Optimized Processes in the Food and Animal Feed Industry.....5
 More Efficient Processes for Water Treatment..... 7
 More Efficient Stock Preparation with Less Maintenance Costs.....9
 Precise Separation Processes for the Chemical Industry.....11
 Technical Information.....12



Optimized Processes

in the Food and Animal Feed Industry

Increase the throughput of your application while also improving the screening efficiency. Wedge wire screens from ANDRITZ Fiedler offer excellent possibilities for optimizing your separation and filtration processes. Thus in comparison to wire meshes or perforated materials, wedge wire screens with their continuous slots have substantially more open area and very precise openings. The

stable and durable design extends the life cycle, and the slots are low-maintenance and nearly plugging-free due to the shape of the profile wires. With the development of our filter elements, we always have the reliability and productivity of your application in mind. Wedge wire screens offer exceptional design variety. This facilitates a large range of types and sizes and – due to use

of high-quality materials and improvements – variable possibilities of use in sensitive areas of food and animal feed production. The following list gives examples of some products and applications.

Candle filters

Candle filters are used in many areas of food production, especially in the production of beverages and semiliquid products such as syrup and jam. But candle filters are also used for preparation of process water. A lot of attention here is on the precision of the

slots and – to the extent required – on the roundness of the candles. That gives your process the required security and reliability.

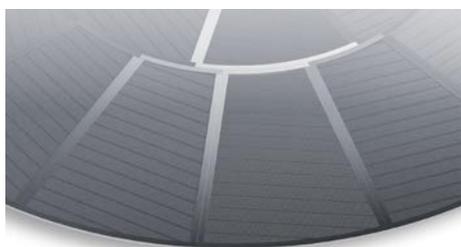


Centrifuges

Centrifuges are used for solid-liquid separation so as to continuously discharge solids and liquids.

ANDRITZ Fiedler wedge wire screen baskets provide a large open area for more

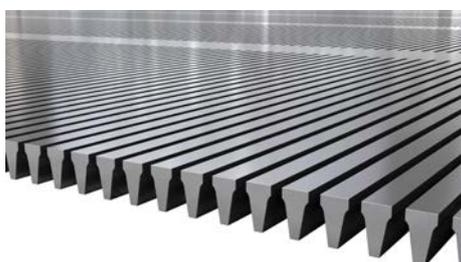
efficient separation processes. A longer service life and more favorable maintenance intervals are ensured by the high-quality surface character and stability.



Lauter vats

In brewing technology, the wort is separated from the remains in the lauter vat. Wedge wire screen strainers provide a larger open area that generates more throughput and

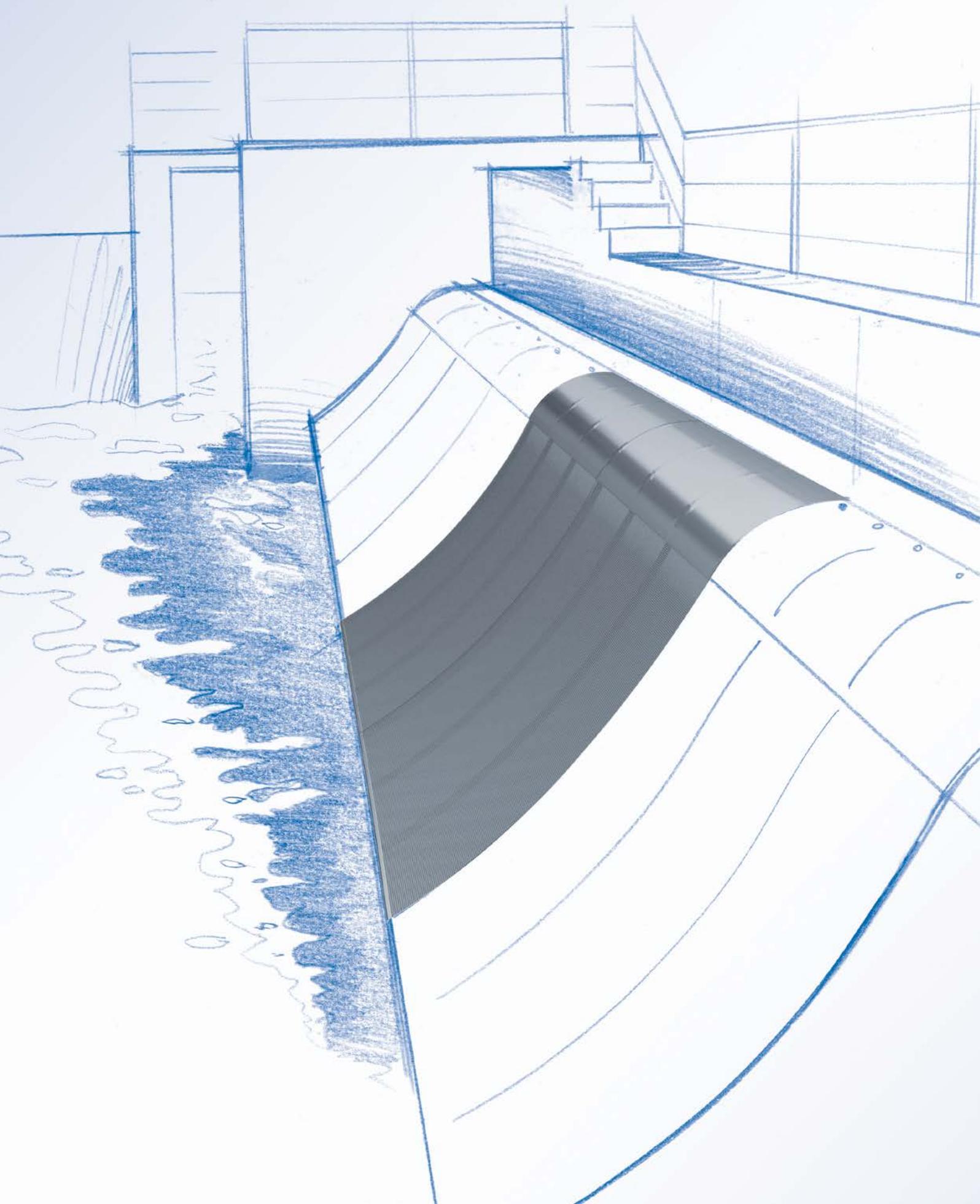
increases the productivity of your system. -> [Alternative](#)



Alternative:

As an alternative to wedge wire lauter vats, ANDRITZ Fiedler also provides lauter vats with milled slots. Slot-milled lauter vats have a more compact design and are thus easier to clean. Contact us – we

are happy to support you in optimizing your lauter vat.



More Efficient Processes for Water Treatment

Water is a precious resource. When it comes to successful water treatment, the most important factors are low maintenance cost, large open area, easy cleaning and a long service life along with process reliability. Wedge wire screen technology from ANDRITZ Fiedler offers a variety of application possibilities here.

These are for instance water intake for obtaining cooling water, process water or domestic water, water filtration and for retention of solids such as active carbon or resins. The design of the screens is optimized to ensure the most uniform possible flow and to prevent clogging of the screen.

Here are some examples of ANDRITZ Fiedler wedge wire screen components used in the area of water treatment.

Water intake systems

Water intake baskets can be made of stainless steel or copper-nickel alloys, depending on the area of application. The aim is to configure the water intake so that it is gentle and continuous without impairing

the flora and fauna in the respective waters. ANDRITZ Fiedler supports you in the design and construction of a solution custom-made for your process.



Resin traps

Resin traps are safety devices that prevent penetration of resins or solids into the pipe system. They are used after ion exchanger and active carbon systems, for example. They reliably protect the

downstream pipes, heat exchangers and pumps. The highest precision of the filter elements and permanent availability are thus the decisive factors.



Bow screens

Bow screens facilitate inexpensive and easy solid-liquid separation of stones, sand, fibers and organic elements. The simple functional principle is based on the curved shape of the screen. The foreign materials slide along the screen surface by means of gravity while the

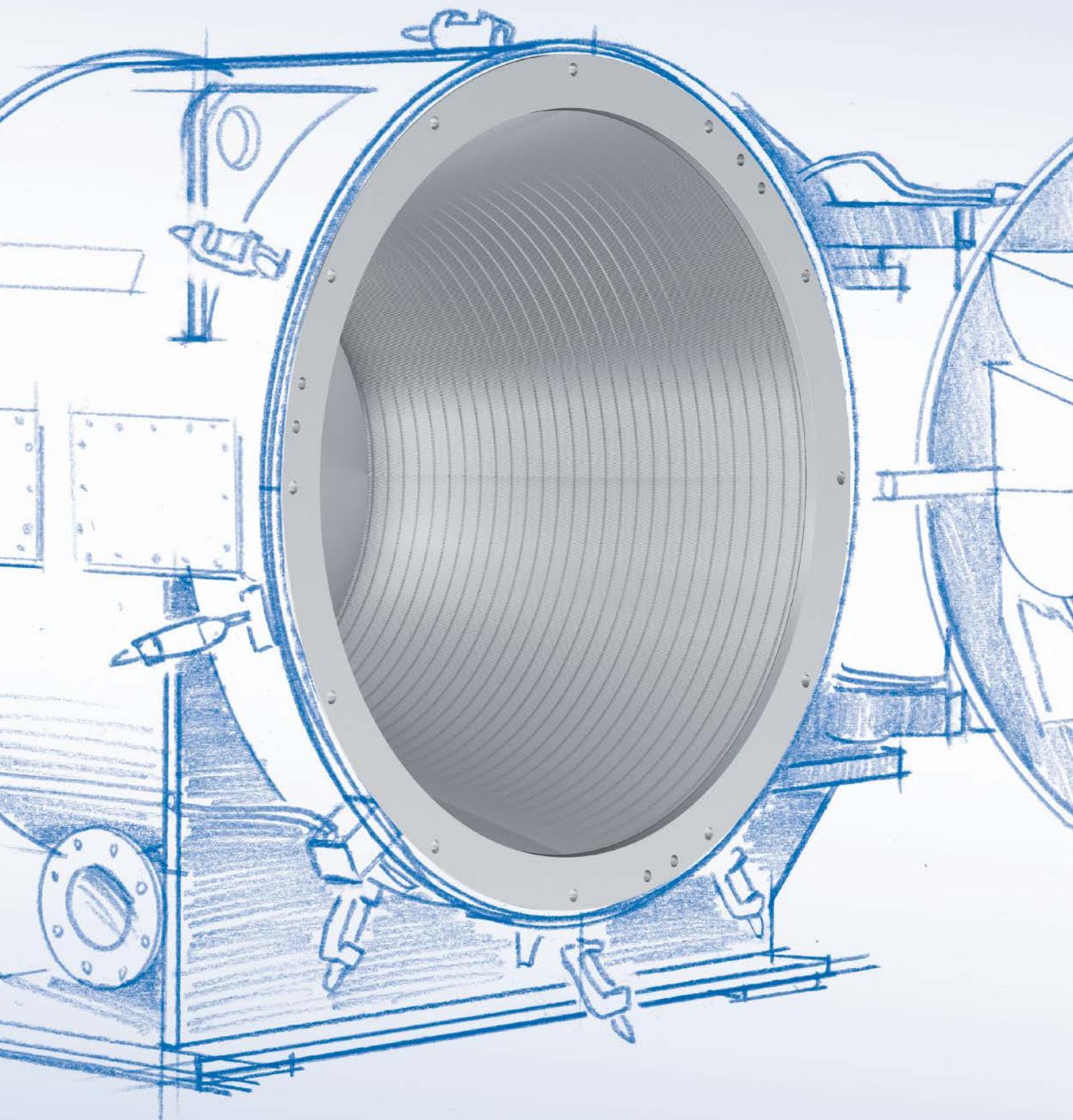
liquid passes through the screen. Due to the use of ANDRITZ Fiedler wedge wire screen technology, bow screens are a durable and low-maintenance screening element.



Distributor / collector systems

Distributor systems are used in many areas such as desalination, water softening and in combination with resin traps. They consist of a main pipe connected to a series of side arms. These side arms are as a rule made of a wedge wire screen and are in part

furnished with an inside perforated pipe. They provide an inexpensive and reliable solution that ensures uniform distribution of the volume flow.



More Efficient Stock Preparation with Lower Maintenance Costs

In many industrial processes, dewatering, grinding or separation of materials is an essential parameter that influences both the quality of the end product as well as the energy requirement. Dewatering is done mostly by separators, presses, mills or centrifuges. ANDRITZ Fiedler has decades of experience

in solid-liquid separation and supports you in the selection and design of the optimal screen components for your process. The emphasis is on high quality products with a long service life and high level of screen resistance. Use of corrosion-resistant steel reduces the maintenance costs and thus increases

the productivity of machines and systems. Here are some examples of ANDRITZ Fiedler wedge wire screen components used in the area of stock preparation.

Rotation screens

Rotating wedge wire screen drums are used for separation of solids from liquids. Along with their use in clarification plants for domestic and industrial waste water, they can also be reliably used for waste water treat-

ment in many industries. Low-maintenance components and a long service life of the screens help in reducing operating costs.



Mill screens

Depending on the product, auxiliary materials such as sand, pellets and beads are used in mills. Wedge wire screen baskets have the task of reliably holding back the auxiliary materials in the mills and at the same time filtering the milled product.

Wedge wire screens from ANDRITZ Fiedler are exactly coordinated to your requirements and, thanks to their precise production technology and a multitude of special alloys, support the desired milling result.



Screw presses and separators

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

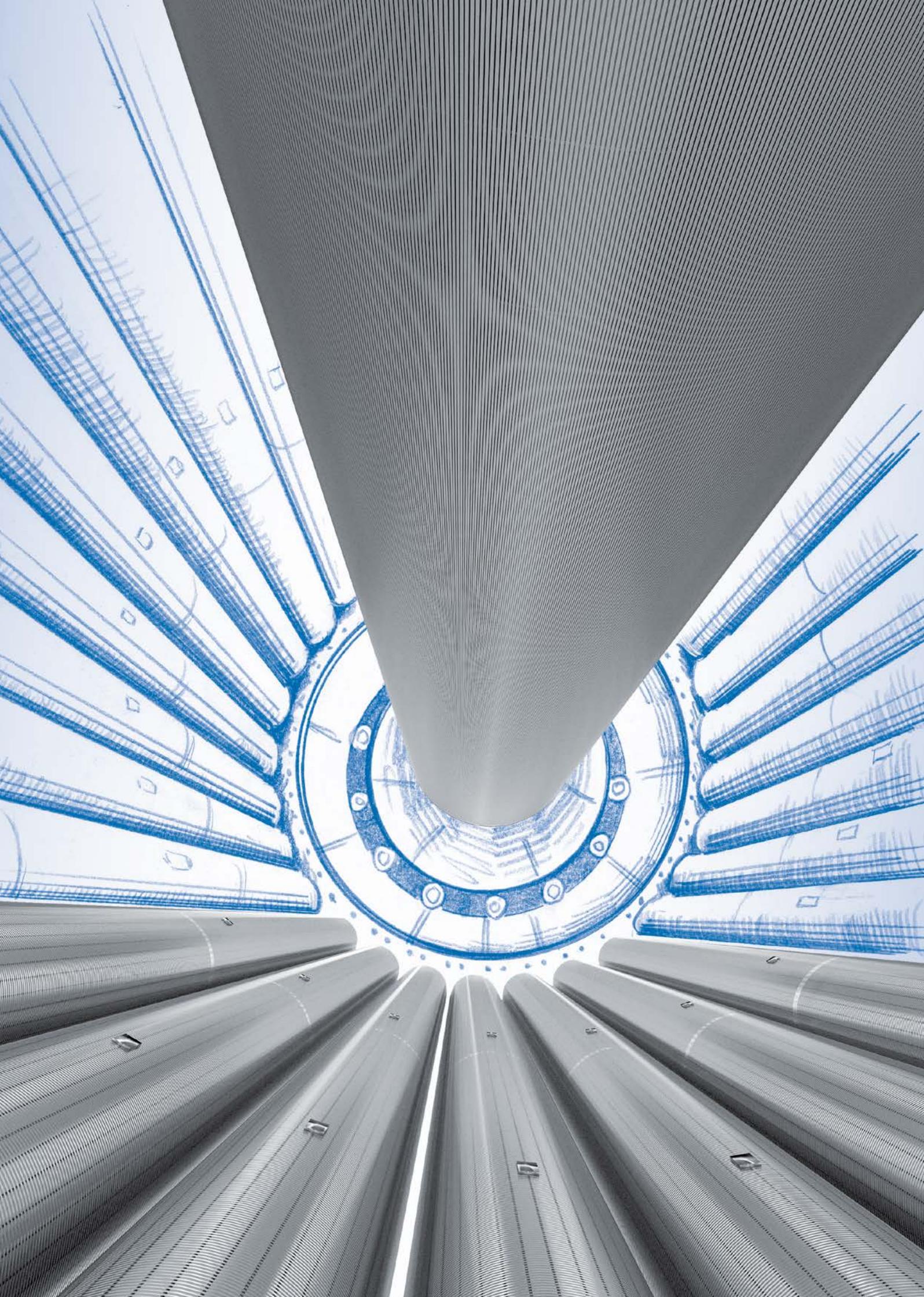
screw separators from ANDRITZ Fiedler have a large open area and at the same time less of a clogging tendency and high accuracy of shape and fit. The entire process is thus less prone to malfunction, while offering low maintenance and energy efficiency. -> [Alternative](#)



Alternative:

In addition, in case of extreme pressure loads in your processes ANDRITZ Fiedler can also provide screen baskets in drilled, slot-milled or (Bar-tec) bar screen design. Bar-tec screen baskets are characterized by their precise roundness and above all a solid TIG-welded design, resulting in

substantially higher pressure stability and a longer service life. In addition, depending on the requirements, various surface refinements like hardening or coatings can improve lifetime.



Precise Separation Processes for the Chemical Industry

In the manufacture of chemical products, wedge wire screens are predominantly used for separation. Supporting grids, collectors/distributors, nozzle plates and radial flow components are designed and produced by ANDRITZ Fiedler. Wedge wire screens ensure precise separation and long operating

times due to the large open area and high surface quality. The multitude of available materials allows adaptation of the designs to the respective process requirements with the aim of extending running times and keeping the maintenance costs as low as possible. With its vast experience, ANDRITZ Fiedler

offers reliability and high quality. Here are some examples of ANDRITZ Fiedler wedge wire screen components that are used in the chemical industry.

Radial flow components

Ion exchangers, filters and reactors are always passed through radially if continuous regeneration of the filter medium or catalyst is necessary. Radial flow components are characterized by little pressure loss and optimal flow distribution. The high surface quality of the wedge wire screen reduces

the abrasion of the catalyst or filter medium and ensures long process running times. ANDRITZ Fiedler supplies process-optimized center pipes, outer baskets and scallops in wedge wire screen and perforated plate design.



Nozzles

Nozzles provide for optimal distribution of media in chemical reactors and filters. They allow provision of a larger separation surface beyond the available container cross section. Wedge wire screen nozzles

are made of materials coordinated for adaptation to aggressive or abrasive media and for extreme process conditions.



Supporting grids

Supporting grids are used in filters, ion exchangers and reactors. They are designed for greatest bearing loads with the smallest slots. ANDRITZ Fiedler supports you in the

static calculation and design of the grids so as to ensure process reliability and the longest possible service life of the grids.



Distributor / collector systems

Distributor systems are used in many areas such as desalination, water softening and in combination with resin traps. They consist of a main pipe connected to a series of side arms. These side arms are as a rule

made of a wedge wire screen and are in part furnished with an inside perforated pipe. They provide an inexpensive and reliable solution that ensures uniform distribution of the volume flow.

Optimal Filtration Result

thanks to High-Quality Materials

Profile wires

With the use of high-quality materials, profile wires meet the highest requirements. The ANDRITZ Fiedler range of products includes all common profile wires – from the standard profile wire to our low-wear PW profiles. Along with standard materials such as 1.4301 and 1.4571, the profile

wires can also be made of special materials. The following table gives an overview of our most popular profile wires. Other profile variants can be supplied upon request.



Profile wire	P 5	P 7	P 10	P 12	P 15	P 18,3
Width (mm) A	0,50	0,76	1,00	1,19	1,50	1,80
Height (mm) B	1,20	1,30	2,00	2,24	2,50	3,70
Cross section						

Profile wire	P 18,4	P 22	P 23	P 28	P 30	P 34
Width (mm) A	1,80	2,20	2,30	2,80	3,00	3,40
Height (mm) B	4,50	4,50	3,50	5,50	4,60	7,50
Cross section						

Profile wire	P 50	PW 15	PW 20	PW 24	PW 33	PW 50
Width (mm) A	5,00	1,50	2,00	2,40	3,30	5,00
Height (mm) B	10,00	2,50	3,50	5,00	6,30	10,00
Cross section						

Reliable Combination

Many Paths to a Perfect Process

Support wires

Depending on the application, requirement and the profile wire chosen, there are a multitude of support wires available. ANDRITZ Fiedler is ready with advice in the selection of the optimal support wire variant / profile wire combination so as to

achieve process reliability and the maximum service life. The following table gives an overview of our most common support wire types. Other support wire profiles can be supplied upon request.



Support wire	R 45	R 60	D 38	I 52	I 102
Width (mm) A	4,50	6,00	3,80	2,30	2,00
Height (mm) B	4,50	6,00	5,50	4,80	10,00
Cross section					

Support wire	I 152	I 153	I 252	I 403
Width (mm) A	2,00	3,00	2,00	3,00
Height (mm) B	15,00	15,00	25,00	40,00
Cross section				

Support wire	Q 20	Q 25	Q 35	Q 55
Width (mm) A	2,00	2,00	3,00	4,00
Height (mm) B	2,28	3,00	5,00	8,00
Cross section				

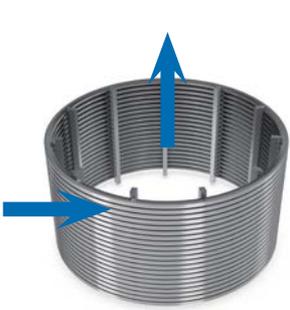
Design Influences the Process

The Right Solution for Any Flow Direction

The effectiveness of your process is decisively influenced by the size of the screen element's slotted hole and its design. Certain designs and special structures such as inversely welded profile wires or the wire base design can be directly produced

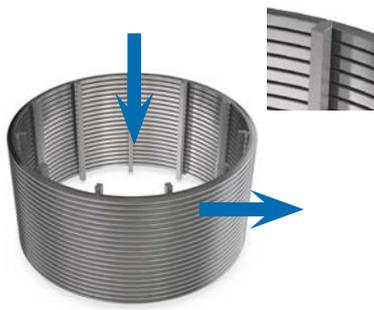
with the aid of special wire winding machines. All others are produced from tailored wedge wire screen mats. All alloys that can be welded and are corrosion-resistant can be processed in various wire widths and shapes.

Our on-site representative will be happy to advise you.



RTI

Radial slots,
flow direction: outside to inside



RTO inv

Radial slots,
Special design: Inverse welding,
flow direction: inside to outside



ATO WB

Axial slots,
Special design: Wire Base,
flow direction: inside to outside



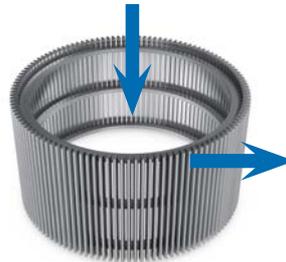
ATO

Axial slots,
flow direction: inside to outside



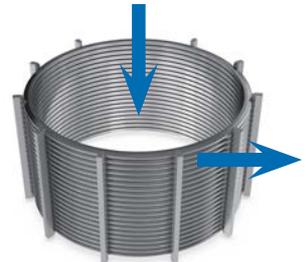
ATI

Axial slots,
flow directions: outside to inside



ATO inv

Axial slots,
Special design: Inverse welding,
flow direction: inside to outside



RTO

Radial slots,
flow direction: inside to outside

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