

Wedge Wire Screens



Screening
Media

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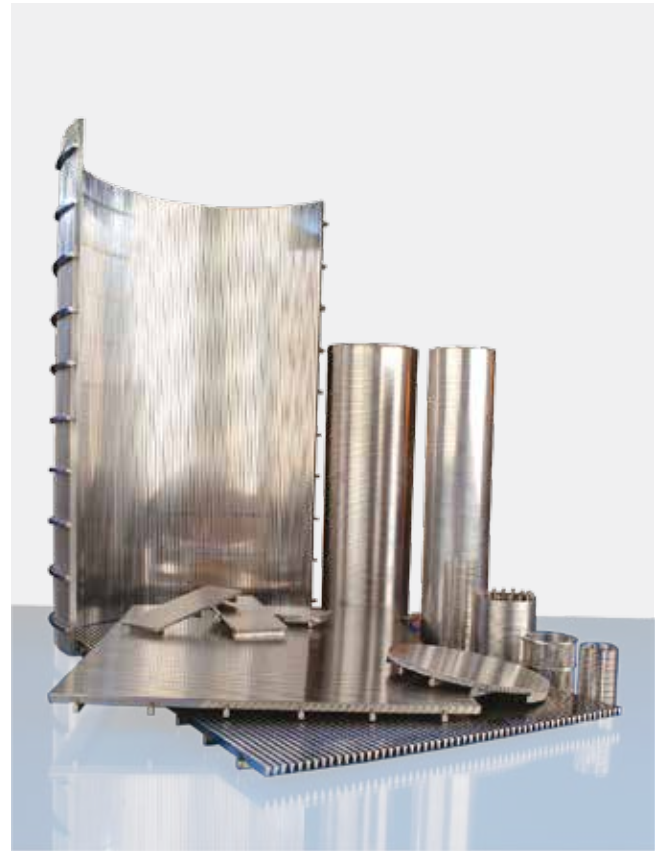


Wedge Wire Screens

Slotted wedge wire screens are reliable for use in numerous filtration processes for solid and liquid particles. Mainly used in Gas and Oil, Chemical, Mining, Food and Paper Industries. We manufacture them from profiled wires of high quality stainless and acid-proof steel. The technology of electro welding used for joining profiled wires to a set of supporting rods results in extremely precise aperture dimension.

They work extremely well in both dynamic and static structures, providing optimal effectiveness even in tough and aggressive work environments. Our company offers flat or round welded sieves of different sizes and shapes and many types of fittings, to suit individual requirements. Our wedge wire range of products includes:

- Wedge wire screen panels.
- Wedge wire cylinders and tubes
- Products based on wedge wire screens:
 - Flat panel wedge wire screens.
 - Curved wedge wire.
 - Gutter type wedge wire.
 - Cone and basket wedge wire.
 - Pro-CLIN wedge wire modular system.
 - Others.



Characteristic features of wedge wire screens

Extended durability

- Apertures sizes do not vary as screen wears down

High screening effectiveness

- Capable of receiving heavy loads
- High screening area
- No clogging
- Perfectly smooth and flat surface
- High precision of execution
- Increased capacity and more precise separation, dewatering and filtration
- Self-cleaning effect
- Low pressure loss

High open area and strength parameter

- Proper size of profile wire
- Proper size of structural support wire
- Profile shape of working wires (type Sb, Sbb or special wires)

Increased economical effectiveness, lower cost

- Higher efficiency
- Performance of exploited resources
- Reduced maintenance cost

Applications

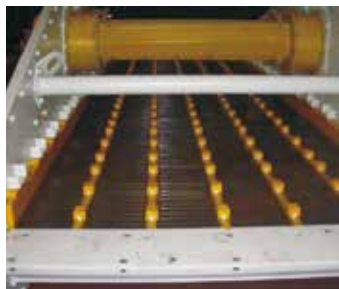
Gas and oil industry

- Production of fuel and lubricants.
- Desulphurization.
- Drying of natural gas.
- Regeneration of catalysts.
- Catalytic reactors.
- Protection of fittings and compressors.



Chemical industry

- Processing of paints and coatings.
- Processing of chemicals.
- Processing polymers.
- Purification of potassium.
- Purification of phosphate.



Mining

- Coal enrichment.



Food industry

- Extraction.
- Fluidized beds.
- Absorption.
- Adsorption.
- Sorting.
- Drying.



Cellulose and paper industry

- Coating.
- Blending.
- Dewatering.
- Refining.



Water process

- Drinking water treatment.
- Waste water treatment.
- Industrial water treatment.
- Ion exchanger.
- Sea water desalination.
- Irrigation.



Exploitation of energy and mineral resources

- Water exploitation.
- Oil extraction.
- Extraction of natural gases.
- Recycling.

Wedge wire flat panels screens

Wedge wire flat panel screens are manufactured by welding special profiled working wires to support wires at an angle of 90 degrees.

A precise slot is achieved by applying modern welding technology on working wires and support wires. The result is a rigid screen construction capable of withstanding heavy loads with a great resistance.

Innovative solutions of technology allow:

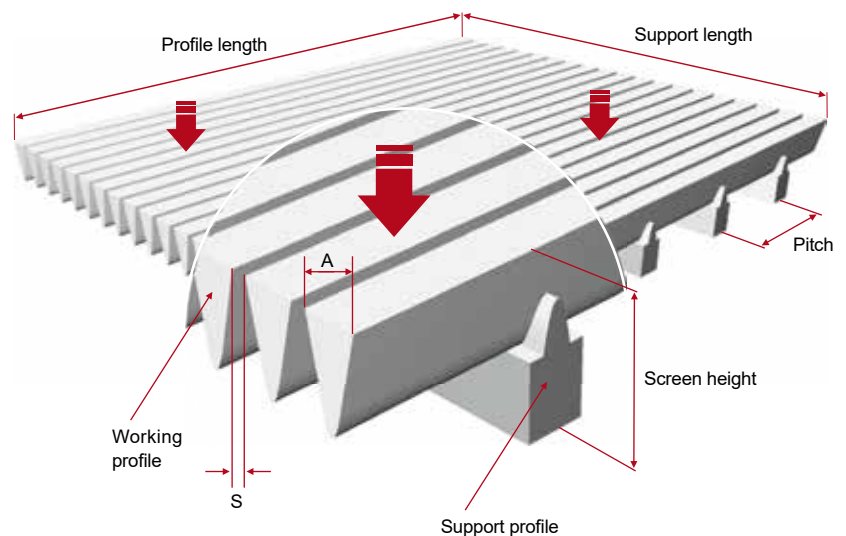
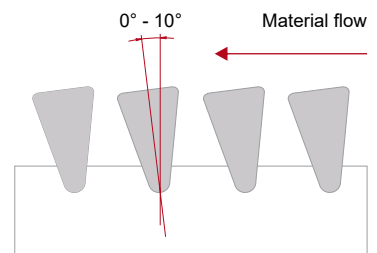
- to control quality of welding.
- to use various working wires.
- to design various slot sizes in one screen.
- to design various support wires in one screen and
- various distances between supports in one screen.
- to gain superior flatness of sieves (no corrugation of working wires between support wires).

Standard Tolerances*:

Length and width	
≤ 500 mm	± 2 mm
> 500 mm and ≤ 2000 mm	± 3 mm
> 2000 mm	± 4 mm
Slot opening	
± 0,050 mm	
max. deviation ± 0,100 mm	
Screen height	
± 0,3 mm	
Diagonal	
≤ 500 mm	± 2 mm
> 500 mm and ≤ 1000 mm	± 3 mm
> 1000 mm and ≤ 2000 mm	± 4 mm
> 2000 mm	± 5 mm
Flatness	
4,00 mm/m	
Straightness	
4,00 mm/m	

* For other tolerances please check availability.

Slot: from 0.05 mm
Max. dimensions: 3500 x 4,000 mm
Profile tilt: 0° - 10°



Screening area

An important parameter of the screen is the open area. Open area F_0 (%) is the relation of the slot surface to the total screen surface. Open area is calculated according to the following formula:

$$F_0 = S/(S+A) \times 100 (\%)$$

A – Working profile width (in accordance with the profiles table)

S – Slot size

For example:

Screen made from Sb28 profile with slot $S=0.24$ mm

$$F_0 = 0,24/(0,24+2,2) \times 100\% = 9,6\%$$

Cylindrical screens

Slot: from 0.02 mm

Max. Length: 6,000 mm

Standard Tolerances*:

Diameter		Slot opening	
$\varnothing \leq 300$ mm	± 2 mm	$\pm 0,030$ mm	Max. Deviation $\pm 0,100$ mm
$\varnothing > 300$ mm	$\pm 2,5$ mm		
Length		Screen height	
$\varnothing \leq 300$ mm	± 2 mm	4,00 mm/m	
$\varnothing > 300$ mm	± 4 mm		

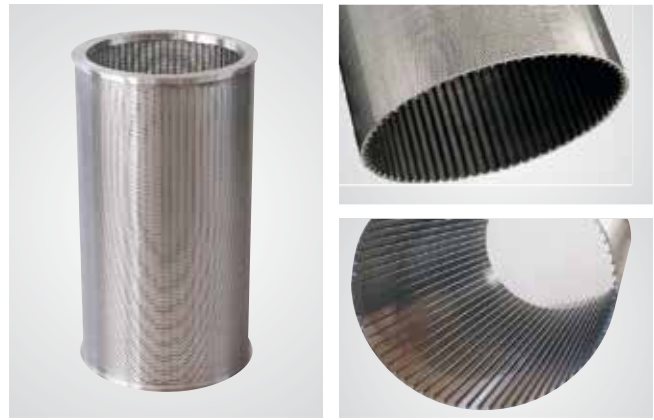
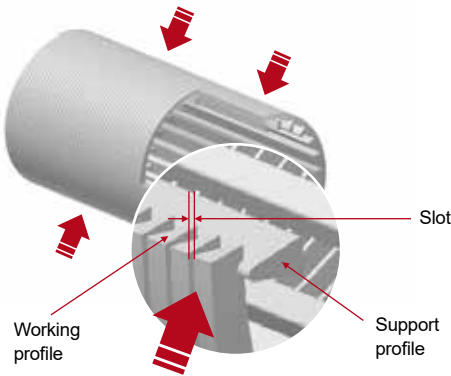
* For other tolerances please check availability.

Cylindrical screens are made by simultaneously winding a spiral of profiled working wire and welding them to support wires, which are arranged along the axis of the cylindrical construction. This technology makes it possible to provide welded profile wire screens for applications where high precision of the screen together with high strength is required.

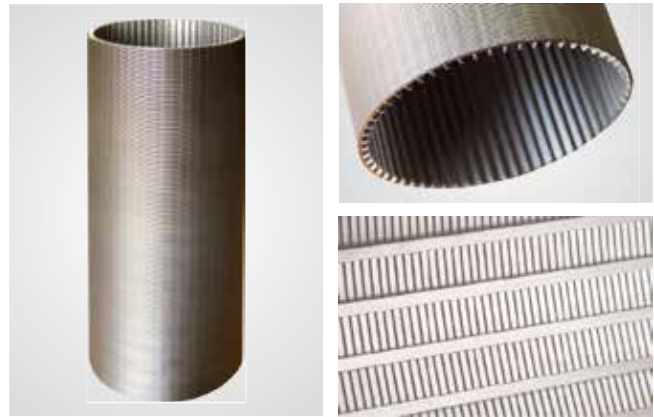
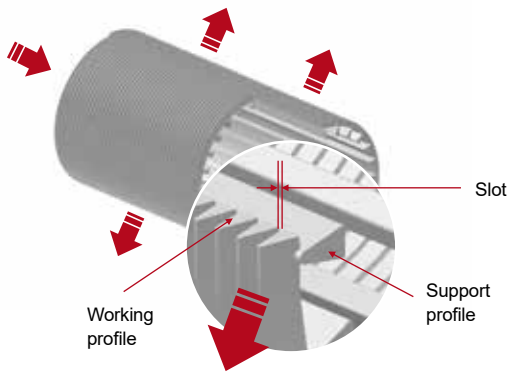
Thanks to new welding technology we can provide:

- optional distance between support wires.
- very precise and repeatable slot.
- screens in accordance to special requests of our clients.

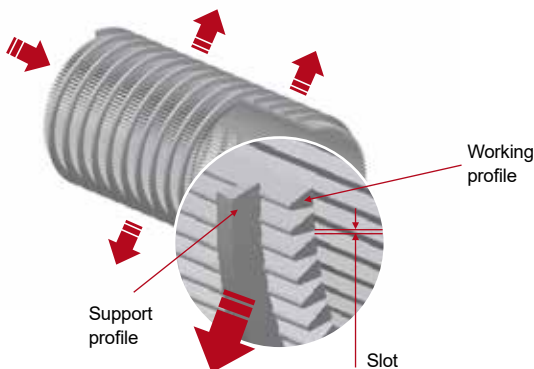
OZ - Circumferential slot, flow from outside to inside



OZR - Circumferential slot, flow from inside to outside



RW - Slot parallel to the axis, flow from inside to outside



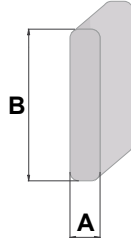
Technical parameters

Support profiles

Type I

Description	A (mm)	B (mm)
I 10 x 3	3,00	10,00
I 10 x 2	2,00	10,00
I 12 x 3	3,00	12,00
I 15 x 3	3,00	15,00
I 18 x 2	2,00	18,00
I 20 x 2	2,00	20,00
I 30 x 2	2,00	30,00
I 38 x 3	3,00	38,00

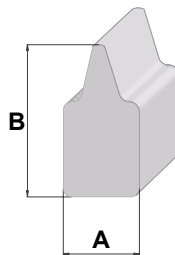
Other dimensions available on request



Type Q

Description	A (mm)	B (mm)
Q 25	2,00	3,00
Q 35	3,00	5,00
Q 55	4,00	8,00

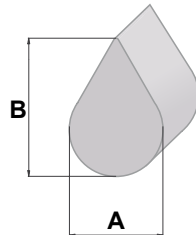
Other dimensions available on request



Type D

Description	A (mm)	B (mm)
D 45	3,8	5,6

Other dimensions about special order

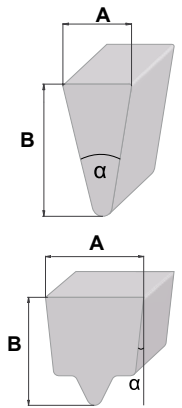


Working profiles

Type Sb

Description	A (mm)	B (mm)	$\alpha(^{\circ})$
Sb 6	0,50	1,20	12
Sb 8	0,60	1,20	22
Sb 10	0,75	1,30	20
Sb 12	1,00	2,00	20
Sb 18	1,50	2,50	23
Sb 22	1,80	3,70	23
Sb 28	2,20	4,50	23
Sb 34	2,80	5,00	23
Sb 42	3,40	6,50	23
Sb 60	4,00	9,00	20
Sb 70	5,00	10,00	24
SbA 50	5,00	6,00	40
Sb 55*	5,00	5,50	6

Other dimensions available on request

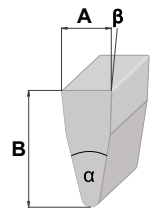


Sb 55*

Type Sbb

Description	A (mm)	B (mm)	$\alpha(^{\circ})$	$\beta(^{\circ})$
Sbb 34	2,20	5,00	23	4
Sbb 38	2,50	4,00	40	5
Sbb 42	2,80	6,00	23	4
Sbb 48	3,40	6,00	70	4
Sbb 50	3,50	8,00	23	4
Sbb 76	5,00	10,00	23	5
2,4 x 5	2,40	5,00	23	0
3 x 6,5	3,00	6,00	23	0

Other dimensions available on request



Special profiles

Special working wires separate highly abrasive materials. During their service life, slot size does not have a considerable variation as the working surface wears down. They are ideal for cylinders and conical sieves used in vibrating centrifuges. They increase the sieve's life span together with preventing clogging.

Standard materials

Structure	DIN	AISI/ASTM	UNI/DIN	BS	Anfor	Branding
Ferrite	1.4016	430	X8 Cr17			
Austenite	1.4301	304	X5 CrNi 1810	304 S 15	Z 6 CN 18.09	
	1.4307	304 L	X2 CrNi 1811	304 S 12	Z 2 CN 18.10	
	1.4373	202	X12CrMnNiN 18-9-5	-	-	
	1.4401	316	X5 CrNiMo 1712	316 S 16	Z 6 CND 17.11	
	1.4404	316 L	X2 CrNiMo 1712	316 S 12	Z 2 CND 17.12	
	1.4439	317 LN	X2 CrNiMoN 17-13-5	-	-	
	1.4539	904 L	X1 NiCrMoCuN 25205	S 31254	Z 1 NCOU 25.20	SMO 904
Duplex	1.4541	321	X6 CrNiTi 1811	321 S 12	Z 6 CNT 18.10	
	1.4571	316 Ti	X6 CrNiMoTi 1712	320 S 31	Z 6 CNDT 17.12	
	1.4462	329 LN	X2 CrNiMoN 2253	S32205	Z 2 CND 22.05 Az	SAF 2205
Others	1.4410	439	X2 CrNiMoN 2574	S32750	Z 3 CND 25.07 Az	SAF 2507
	2.4360		NiCu 30 FE	-	-	Monel 400
	2.4610		NiMo 16 Cr 16 Ti	-	-	Hastelloy C4
Carbon Steel*	2.4816		NiCr 15 Fe	-	-	Inconel 600
	1.0038	A570 Gr 30	-	Fe 360 B FU	E 24 - 2NE	-
	1.0570	A572 Gr 50	-	Fe 510 D1 FF	E 36 - 3	-

* Possible finish: galvanised steel, Pro-Zinal (ZnAl), varnished steel.

** Implementation in other degrees available on request.

Other wedge wire products

Flat sieves

Flat sieves are flat panels of welded profile wire, fixed to a frame and adapted to assembly. Depending on the kind of application, flat sieves can be divided into:

- **Sieves working in dynamic systems:**
 - Panels to be incorporated in vibrating sieves.
 - Special reinforcement depending on the sieve load is necessary.
 - Special finishing to guarantee secure, long working time and proper fixing of the sieve to the application frame.
- **Sieves working in static systems:**
 - Do not require any special reinforcements,
 - Can work as bottoms and decks in tanks and storage reservoirs and sumps.

Arch sieves

Arch sieves are mainly used for dewatering and separation of solid particles from liquids. Depending on the kind of application, they can be divided into arch sieves with gravitational loading or arch sieves with pressured loading.

The application of arch sieve provides:

- Uniform flow onto the sieve (using the whole sieve surface)
- High speed of flow onto the sieve
- Increased classification effectiveness and efficiency (due to the possibility of applying the working wire at a defined angle relative to support wire).

Gutter sieves

Gutter sieves are used as bottoms of screw conveyors, where in addition to dewatering or separation, transportation is also required.

Conical sieves and baskets

Conical sieves and conical baskets are mainly used in dewatering centrifuges. They can be divided into two categories depending on their working system:

- **Working in dynamic system:**
 - For all kinds of centrifuges.
 - With self-supporting structure consisting of ribs, rings, flanges which constitute an integral part of the sieve construction. After a period of exploitation the whole basket has to be replaced.
 - Without the supporting structure.

- As screening insert for non-disposable structural frames. The only thing to be replaced is the screen insert

- **Working in static systems:**
 - Filter cartridges.
 - Filter elements for pipelines.

Others

Available on request.

