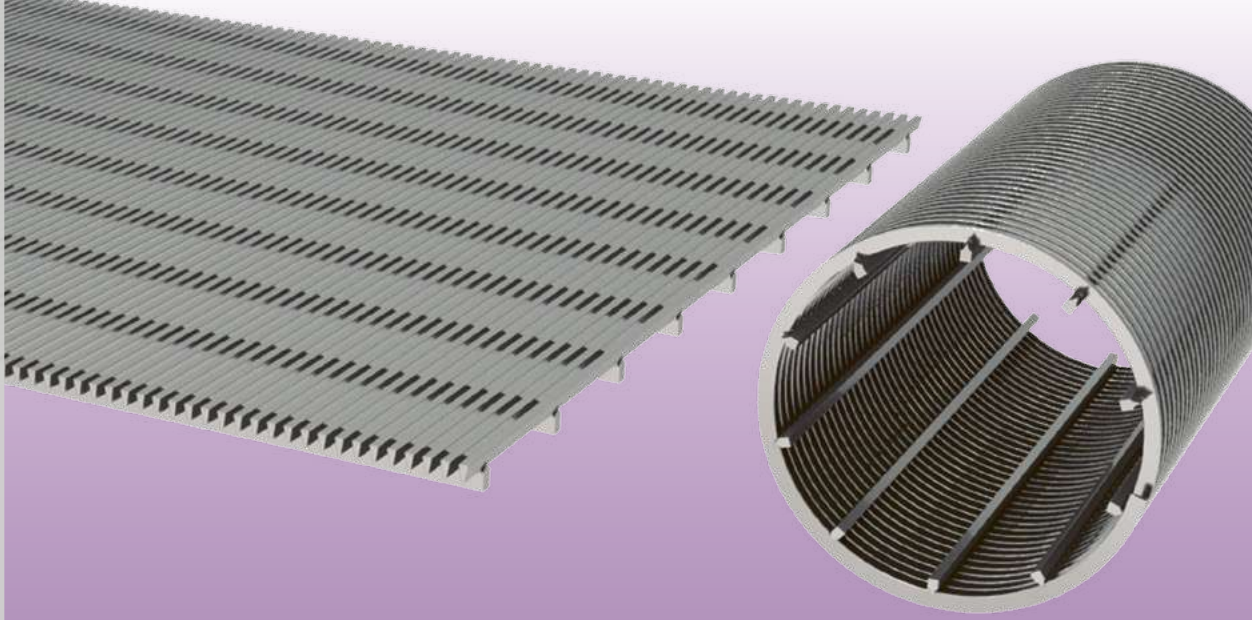


Wedge Wire Screens



Screening
Media

10





Wedge Wire Screens

Wedge Wire Screens are perfect products for separation, filtration, dewatering and purification processes. Its manufacture is based on the electro welding of special working profiled wires onto support profiled wires, the result is a very resistant screen with the capacity to work under heavy loads and withstand tough and aggressive work environments.

Thanks to this very advanced technology, the products obtained have high precision and exact dimensions.

We guarantee standard tolerances for our products.

Our range of Wedge Wire Screens include:

- Wedge wire screen panels.
- Cylindrical Wedge Wire Screens.
- Other products based on Wedge Wire Screens:
 - Flat screens.
 - Arched Screens.
 - Gutter type screens.
 - Cylindrical, Conical and Basket Screens.
 - Others.

Characteristics of Wedge Wire Screens

Extended work life

- The aperture size does not increase as the work surface wears down.

Increased efficiency

- Capability to withstand heavy loads.
- High open area.
- Low clogging.
- Perfectly smooth and flat surface.
- High precision in the manufacturing process.
- Increased capacity and precision of separation, dewatering and filtration.
- Self-cleaning effect.
- Low pressure loss.



High resistance and open area

- Adequate profile dimensions.
- Adequate dimensions of supporting profiles.
- Form of profiled wires (type Sb, Sbb or special wires).

Increased economy, reduced costs

- Higher performance.
- High wear life.
- Reduced maintenance and repair costs.

Application

Gas and oil industries

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



Chemical industry

- Processing of paint and coating.
- Processing of chemicals.
- Processing of polymers.
- Purification of potassium.
- Purification of phosphates.



Mining

- Coal enrichment.



Food industry

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



Paper

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



Water process

- Municipal drinking water treatment.
- Waste water treatment.
- Industrial water treatment.
- Ion exchanger.
- Desalination of seawater.
- Irrigation.



Mineral and aggregate processing

- Exploitation of water.
- Exploitation of crude oil.
- Exploitation of natural gas.
- Recycling.

Flat Panel Wedge Wire Screens

Wedge Wire Screens are manufactured welding Working Profiles to Supports Profiles at a 90° angle.

Thanks to the use of modern welding technology, the electro welding process creates precise slots and a very rigid and sturdy construction, obtaining a product of exceptional resistance and high load capacity.

This innovative technology allows us to:

- Control the quality of welding with great precision.
- Use different types of Working Profile Wires.
- Combine different slots in one screen panel.
- Use different types of Support Profile Wires.
- Position Support Profile Wires at different distances.
- Obtain a perfect flat working surface on the screen (no height variations between the Support Profile Wires).

Standard Tolerances*:

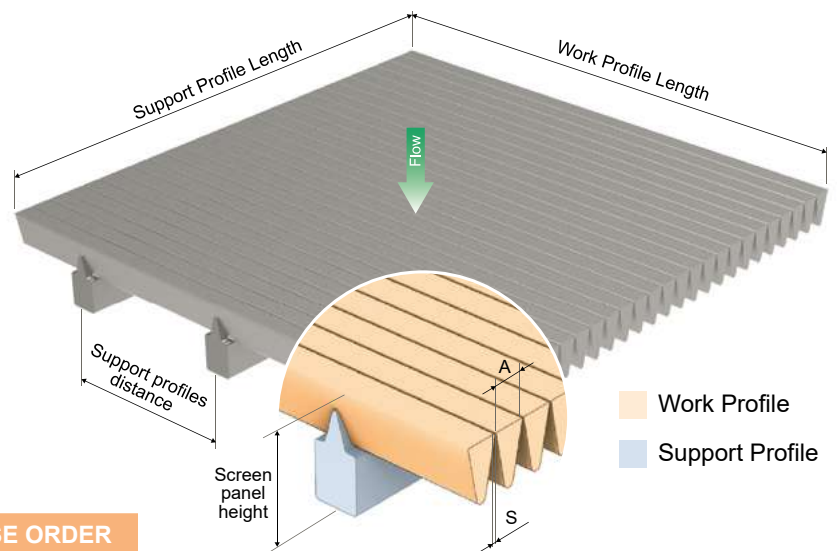
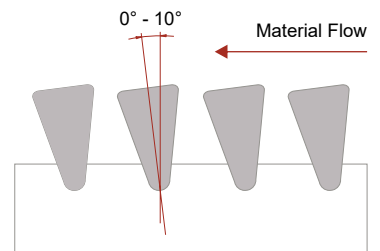
Length and Width	
≤ 500 mm	± 2 mm
> 500 mm y ≤ 2000 mm	± 3 mm
> 2000 mm	± 4 mm
Slot Aperture	
± 0,050 mm	
max. deviation ± 0,100 mm	
Screen Height	
± 0,3 mm	
Diagonal	
≤ 500 mm	± 2 mm
> 500 mm y ≤ 1000 mm	± 3 mm
> 1000 mm y ≤ 2000 mm	± 4 mm
> 2000 mm	± 5 mm
Screen Flatness	
4,00 mm/m	
Screen Straightness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

* Other tolerances on demand.

Slot: from 0,05 mm

Maximum Length: 3500 x 4000 mm

Working Profile Angle: 0° - 10°



REQUIRED INFORMATION FOR PURCHASE ORDER

- **Length** of Working and Support Profiles. - Support Profile **distance**.
- **Type or width** of Working and Support Profiles. - **Screen Panel Height**.
- **Aperture** distance and **Flow** direction. - Required **Quantities**.

Effective Open Area

The most important parameter of screens is the Effective Open Area. This area F [%] is a percentage ratio between the slotted area (open area) and the total area of the screen. It is calculated using the following formula:

$$F_0 = \frac{S}{S+A} \times 100 (\%)$$

A – The width of the Working Profile Wire (according to the profile table)

S – The Aperture Size (distance in between Working Profiles)

Example:

Screens manufactured with Sb28 profile with Aperture Size of $S = 0.24$ mm

$$F_0 = \frac{0,24}{(0,24+2,2)} \times 100\% = 9,8\%$$

Cylindrical Wedge Wire Screens

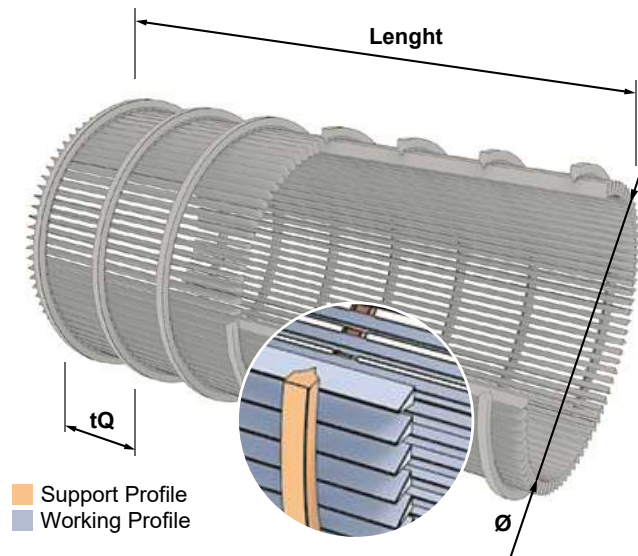
Slot: from 0,02 mm

Maximum Length: 6000 mm

Standard Tolerances*:

Diameter		Slot Aperture	
$\varnothing \leq 300$ 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		

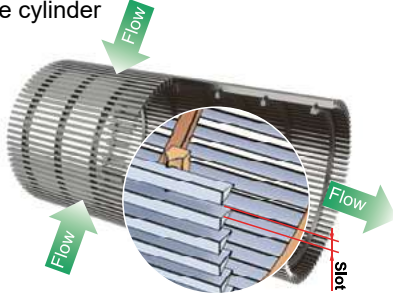
* Other tolerances on demand



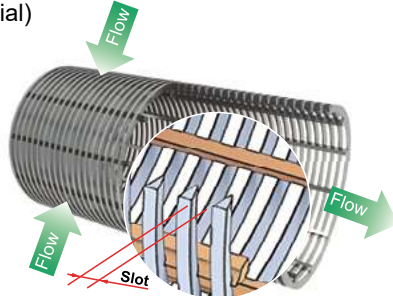
REQUIRED INFORMATION FOR PURCHASE ORDER

- **Length and \varnothing** interior and exterior. of cylinder.
- **Type or width** of Working and Support Profiles.
- **Slot Aperture** distance and **Flow** direction.
- **Support Profile distance.**
- **Required Quantities.**

RZ - Parallel Slot to cylindrical axis, flow of material on the outside of the cylinder



OZ - Circumferential Slot, flow of material on the outside of cylinder (radial)

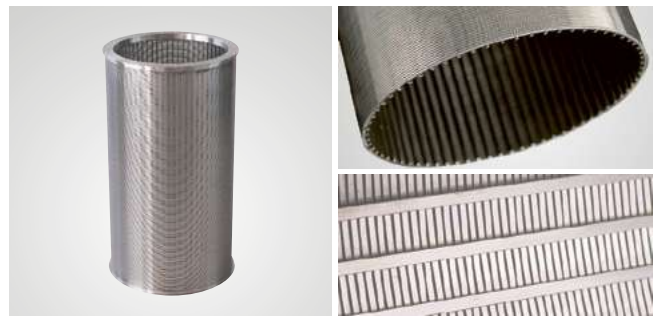


Cylindrical Wedge Wire Screens are obtained by rolling a Working Profile Wire around the axis of a cylinder and welding it to the Support Profile Wires.

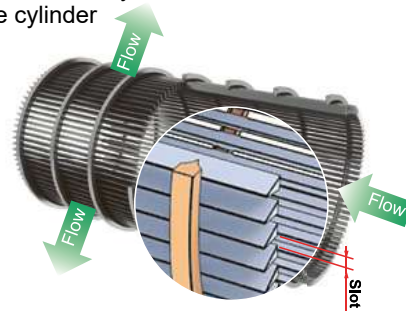
The technology used in this process, creates screens with high dimensional precision, exceptional resistance and high load capacity.

This innovative welding technology allows us to:

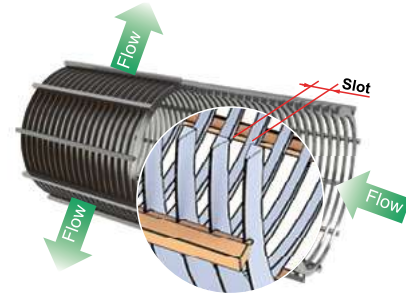
- Provide a wide range of Support Profile distances.
- Precise and repeatable slot apertures.
- Customize screens to our clients' requirements.



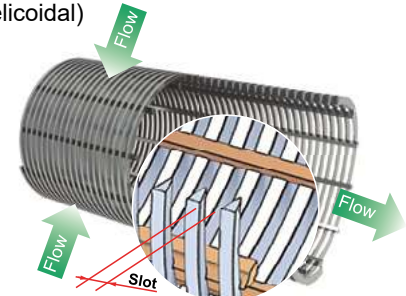
RW - Parallel Slot to cylindrical axis, flow of material on the inside of the cylinder



OW - Circumferential Slot, flow of material on the inside of cylinder



OZ2 - Circumferential Slot, flow of material on the outside of cylinder (helical)



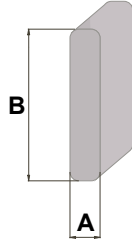
Technical parameters

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

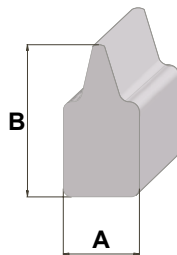
Other dimensions on request



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

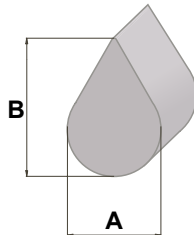
Other dimensions on request



Type D

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

Other dimensions on request

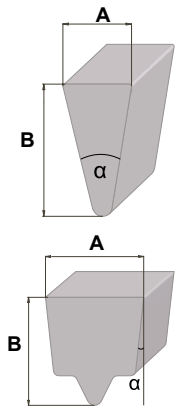


Working profiles

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 on request

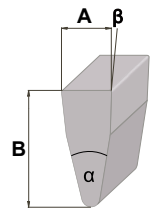


Sb 55*

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 on request



Special Working Profiles

Special Working Profile wires separate highly abrasive materials. During their wear process, slot sizes do not have a considerable increase, this makes them ideal for cylinder and conical sieves used in vibrating centrifuges, extending their durability, reducing down times for maintenance and extending productivity.

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
	1.4541	321	X6 CrNiTi 1811	321 S 12	Z 6 CNT 18.10	
Duplex	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
	1.4410	439	X2 CrNiMoN 2574	S32750	Z 3 CND 25.07 Az	SAF 2507
Others	2.4360		NiCu 30 FE	-	-	Monel 400
	2.4610		NiMo 16 Cr 16 Ti	-	-	Hastelloy C4
	2.4816		NiCr 15 Fe	-	-	Inconel 600
Carbon Steel*	1.0038	A570 Gr 30	-	Fe 360 B FU	E 24 - 2NE	-
	1.0570	A572 Gr 50	-	Fe 510 D1 FF	E 36 - 3	-

* Available finishes: galvanized steel, Pro-Zinal (ZnAl), varnished steel.

** Execution in other steel grades available under demand.

Other Wedge Wire products

Flat Wedge Wire Panels

Flat Wedge Wire Panel Screens fixed on different types of metallic or PU frames enabling them to be fitted or attached to any kind of support deck or frame.

Depending on the type of work we can divide them into:

- **Screens working in dynamic systems:**
 - Modules to be mounted on vibrating screens.
 - Screen panels that require special reinforcements.
 - Screen panels with special accessories, finishes or hardware to be fitted on a screen deck.
- **Screens working in static systems:**
 - Screen panels that don't require special reinforcements and can be used as bottoms and trays in tanks, storage reservoirs and sumps.

If necessary, polyurethane frames can be added to fix them to the machines frame.

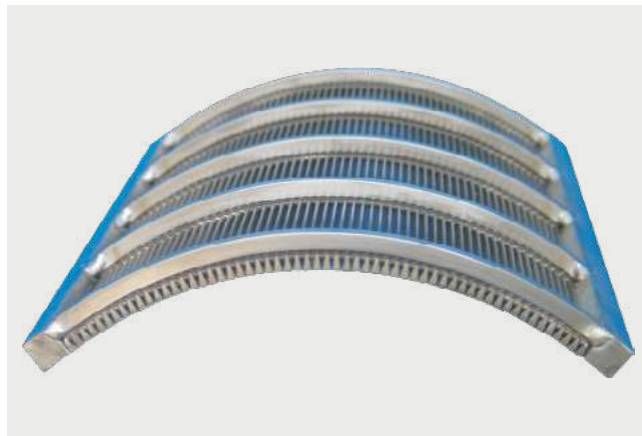
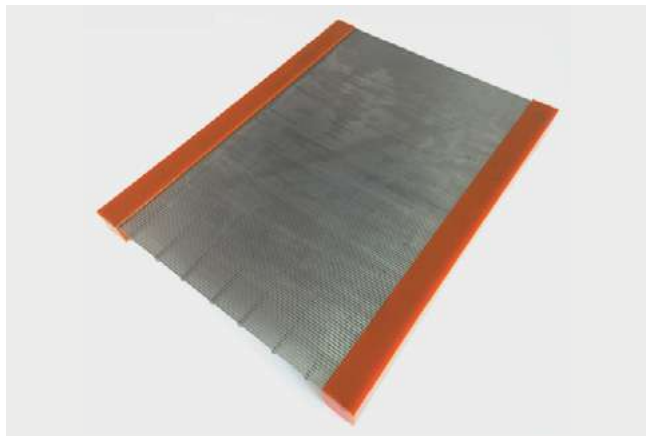


Arch Screens

Arch Screens are mainly used for dewatering or separation of solid and liquid particles. Depending on the type of application they can be divided into Arch Screens with gravitational loadings or pressured loading.

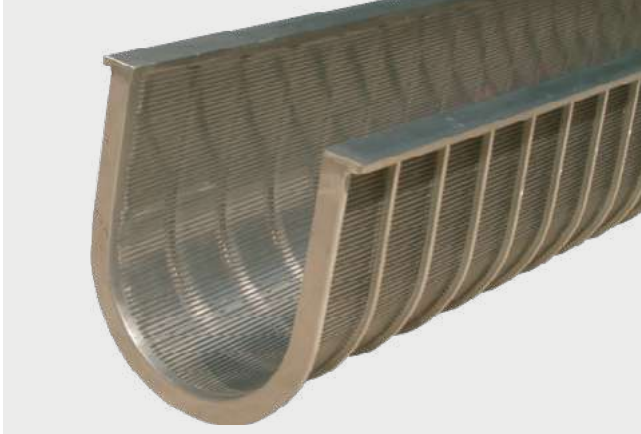
The application of Arch Screens provides:

- Uniform supply of material to the screens deck (using the entire screens working surface).
- High speed flow of material on to the screens deck.
- Increased classification and performance (using the Working Profiled Wires welded to Supports Profiled Wires at a specific angle).



Gutter screens

Gutter type screens are mainly used for Wedge Wire Screw Conveyors, where additional dewatering or separation is required.



Cylindrical, conical or basket screens

Cylindrical, conical, basket or bowl screens are mainly used in Centrifuge Thickening and Dewatering systems.

They can be divided into two categories:

- **Those that work in dynamic systems**
 - For all types of centrifuges.
 - With a self-supporting structure formed by the nerves and rings that constitute an integral part of the screen. When its work life has come to an end, it is necessary to change the entire basket.
 - Without support structure.
 - As a screen insert for non-disposable structural frames. Only replacing the screen insert.
- **Those that work in static systems:**
 - Conical / static screens.
 - Filtration element for pipelines.



Others

Special geometries or products can be developed on request according to clients' specific needs.

