



W I R E S C R E E N S

GIROn

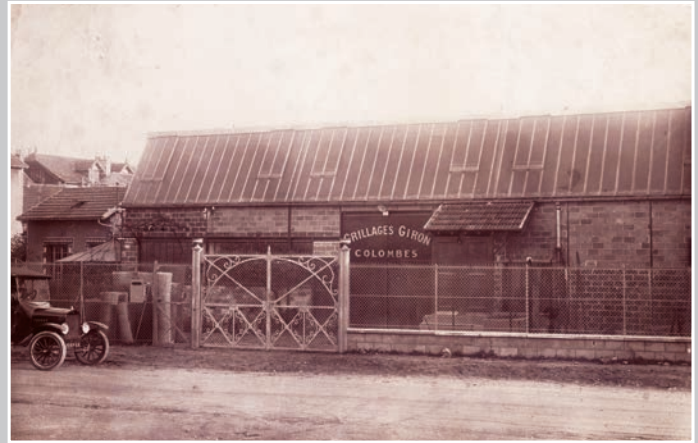
Steel - Polyurethane - Rubber

The experience of precision

GIRON *European leader in industrial screening*

GIRON company, a family story in few dates:

- **1924** - Starting of the company in Paris suburb.
- **1933** - Specialization in high tensile woven-wire screens
Production for extractive industries.
- **1951** - Patent for self-clearing screens (Ondap-Gomme).
- **1952** - Patent for self-clearing screens
(Mixte-Gomme, Lonplan-Gomme).
- **1962** - New facilities in Châtellerault (FR).
- **1991** - New production unit for polyurethane products.
- **1992** - Patent for polyurethane modular systems.
- **1997** - Patent for Polymixte products.
- **2012** - French label « Living Heritage Company »,
regarding the excellence
- **2014** - Label « Origine France Garantie »
« N° agrément : SGS-ICS 140001 ».



Since 4 generations, GIRON works hardly to reach his customers requirements as a profitable partner and technical expert in industrial screening.



What is GIRON today:

- **90 years** dedicated to screening solutions.
- **16.000 sqm** available to produce our products.
- **50.000 screens** delivered all over the globe.
- **Turn over of 12 M€**, including 30% out of France.



GIRON *Experience of precision*

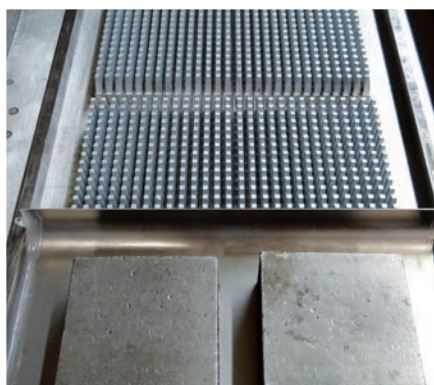
Actually, GIRON has always been positioned as a supplier of technical solutions for customers requiring the optimal cost for each ton of screened materials. The respect of the gradation curve which is directly linked to the screened materials price cost, depends of the quality of the screens used.

To get a profitable benefit of screening problems, GIRON develops for 90 years a sole know-how to produce screens. Our specific production equipments and all our special toolings are designed and manufactured in house to secure all our processes and offer high performance products.

To comply with our own requirements of efficiency and performance, GIRON works in a transparency and quality approach.

The French labels « Living Heritage Company » and « Origine France Garantie » are proof of our commitment and values towards our customers.

Steel production unit



Polyurethane production unit



Conventional woven-wire screen

Why to choose GIRON screens?

SCREEN SERVICE-LIFE

The service-life of woven-wire screens depends on 3 core factors:

1 - The quality of the steel

Considering the importance of the effect of carbon content on the abrasion resistance, GIRON requires 0.5% of carbon as a minimum.

2 - The quality and the type of the wire pre-forming

The pre-forming track is essential to guarantee the best mechanical performance and to secure the required aperture up to the screen is totally used.

3 - The quality of the screening machine

The right setting up of the screen on the machine is crucial regarding its service-life. It is important to check if the tensioning systems or supports are in good conditions and also if the hooks are correctly tightened to avoid any breaking or premature wear.

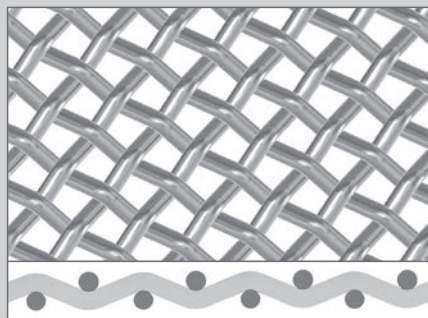
FLAT-TOP WEAVING

The pre-forming track using a ring shape like a «Horse saddle», designed and exclusively delivered by GIRON, combined with the flat-top weaving, lead us to guarantee **at least +30% service-life longer** than a conventional weaving. This weaving is the ultimate development for woven-wire meshes.

GIRON offers his its «flat-top» technology in standard for all medium apertures (mesh from 8 mm) where the precision of the screening and abrasion resistance are primordial.

BREAKDOWN / CONSTANT STOCK

GIRON has more than 12 000 sqm of woven-wire meshes in stock for fast breakdown service, meaning **Same-day dispatch for orders received before 11.00 am.**



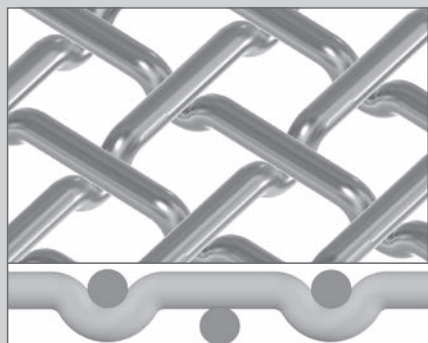
GRILGIRCO

These screens are designed with the most elementary type of pre-forming track characterized by a sine wave undulation to guarantee the perfect adhesion at each intersection and secure a precise mesh.

Because of the closing angle is relatively obtuse at the undulations, this type of pre-forming is obviously more sensitive to shocks than the larger mesh/wire ratio is. This is also the reason why this type of mesh the GRILGIRCO is **usually limited to the finest screening.**

STANDARD RANGE

$0.7 \leq \text{Mesh} \leq 40 \text{ mm}$
 $0.5 \leq \text{Wire} \leq 3 \text{ mm}$



FLAT-TOP PLANGIRCO / PLANDUR

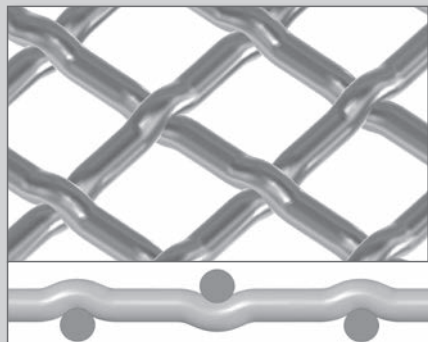
These screens are the ultimate solution to get the longer service-life for conventional woven-wire meshes. GIRON guarantees the best service-life and at least +30% longer than any other pre-forming type.

By combining stamping with a closed angle and die-forming of the wires at each intersection, this pre-forming ensures maximum carry-over of the metal in contact with the screened products and eliminates all vibrations risk between wires until the screen is completely worn out.

The flat-top Plangirco has its **natural place in all medium apertures where screening precision and abrasion resistance are primordial.**

STANDARD RANGE

$8 \leq \text{Mesh} \leq 40 \text{ mm}$
 $4 \leq \text{Wire} \leq 20 \text{ mm}$



PLANGIRCO / PLANDUR

These screens are an evolution of GRILGIRCO pre-forming mainly characterized by a specific track at the intersections of each wire.

GIRON pre-forming track secures the best anchor point between wires and authorizes the PLANGIRCO screens to receive **high mechanical constraints** without any alteration of the requested mesh. The service-life is also uneven compared to competing products.

The PLANGIRCO is more **adapted for the highest apertures**, especially in PLANDUR version (wire $\geq 10 \text{ mm}$) using a dedicated steel leading to withstand shocks without any breaking risk.

STANDARD RANGE

$8 \leq \text{Mesh} \leq 200 \text{ mm}$
 $3 \leq \text{Wire} \leq 20 \text{ mm}$

Flat-top surface

What to use GIRON flat top surface for?

The service life of steel woven-wire screens is, by considering a same wire diameter, directly linked to the quantity of raw material to wear out without modifying the mesh and relaxing the wires network.

Use the GIRON flat-top surface,
it is the warranty to reach :

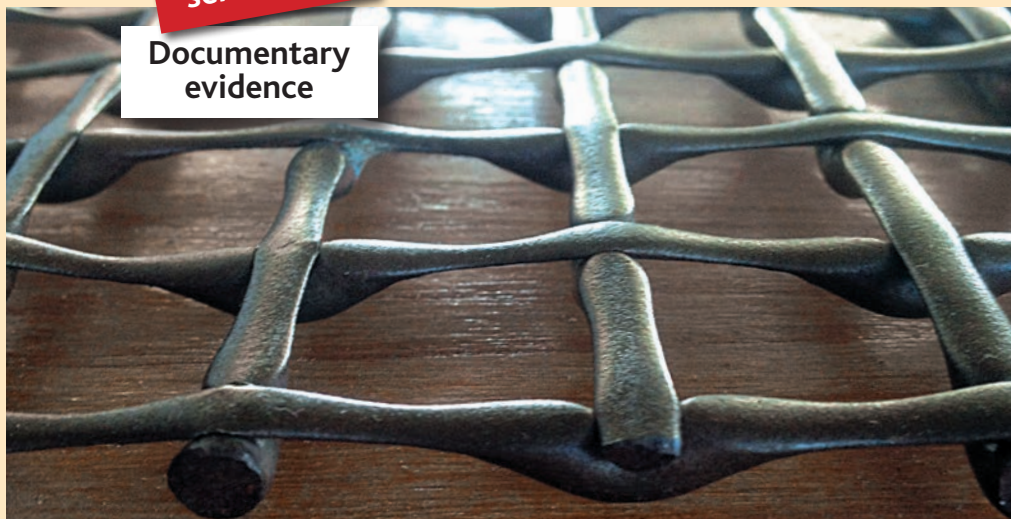
**+30% of
service life**



**+30% of
service life**

With the flat-top surface, the aggregate does not strike any obstacles except the mesh; friction wear sliding effect.

FLAT-TOP SURFACE PRE-FORMING TRACK (E)



**Documentary
evidence**

With any other pre-forming track, the undulation's heads are in the way of the aggregate, so, the wires wear out quicker. Impact + friction wear effect.

HALF-ALTERNATED SLOT PRE-FORMING TRACK (D)



ELEMENTARY SINE PRE-FORMING TRACK (A)



**BUT IN THE END,
WHAT THE +30%
SERVICE LIFE
REPRESENTS FOR
OUR CUSTOMERS?**

For example, let us take the case of a customer working with :

- a 12 sqm two decks screening machine, producing 120 tph of upgraded aggregates
- equipped with 4 screens per deck, meaning 8 screens at 300€ purchasing cost per unit
- getting a 240 000 tons yearly production of upgraded aggregates
- normal consumption of 4 sets/year/deck, meaning the purchase of 32 screens annually
- average market value of considered upgraded aggregates (crushed limestone) ≈ 12€/T

Benefits details here-behind

1 - COST-SAVINGS FOR PURCHASING DEPARTMENT

Cost-saving for the purchasing department is evidenced by the reduction of required screens quantity to upgrade a same aggregate volume. In our example here-above, the financial gain represents **-25% on the screens budget** only by using the GIRON flat-top surface.

ELEMENTARY SINE PRE-FORMING TRACK (A)

Screen's service life = 240 000 Tons / 4 sets
= 60 000 Tons of upgraded aggregates before
stopping production to change the screens

Annual purchase cost: $32 \times 300\text{€} = 9\,600\text{€}$

GIRON FLAT-TOP SURFACE PRE-FORMING TECHNOLOGY (E)

GIRON flat-top screen's service life
= 60 000 Tons +30% = 78 000 Tons of upgraded
aggregates before stopping production,
Meaning $240\,000\text{T} / 78\,000\text{T} = 3$ sets

Annual purchase cost: $3 \times 8 \times 300\text{€} = 7\,200\text{€}$

-25% cost-saving

2 - BENEFITS IN TERMS OF SCREENING MACHINE PROFITABILITY

An important point for our customers is to maximize the production cost-efficiency. This is evidenced by reducing the aggregate production cost per ton upgraded. In our example here-above, the cost-effectiveness represents **-25% on the Euro per produced ton, and avoid 1 production stop = profitable additional upgraded aggregates of 960 tons.**

ELEMENTARY SINE PRE-FORMING TRACK (A)

Annual purchase cost: $32 \times 300\text{€} = 9\,600\text{€}$

→ $9\,600\text{€}$ for 240 000T production = 0.04€/ton

→ 4 mountings/removing per year,
meaning 2 technicians for 4h per deck,
equivalent to 64h per year only
for removing the screens

GIRON FLAT-TOP SURFACE PRE-FORMING TECHNOLOGY (E)

Annual purchase cost: $3 \times 8 \times 300\text{€} = 7\,200\text{€}$

→ $7\,200\text{€}$ for 240 000T production = 0.03€/T

-25% production cost-saving
directly imputable to screens efficiency

→ 3 change of screens' set a year, meaning
2 technicians for 4h per deck equivalent to
48 hours per year only for removing the screens.
So, 8 hour-savings of screening
machine maintenance

-25% maintenance time-saving

and above 8 hours dedicated to production instead
of maintenance: $8 \times 120\text{ tph} = 960$ tons upgraded
aggregates ready to sell meaning

+0.4% of profitability

3 - ADDITIONAL PROFITS DUE TO SALES GROWTH

In our example, taking into account the screen's service life for a same purchase price, the gain represents a **sales growth of more than 200 000 Euros**. This additional turn-over can only be obtained by producing with flat-top surface. Even an extreme low purchase cost cannot reach the benefits of the potential sales growth.

ELEMENTARY SINE PRE-FORMING TRACK (A)

Purchase cost to fully equip the screening machine: $8 \times 300\text{€} = 2400\text{€}$

Before the total wear of the screens,
the screening machine will produce 60 000 tons
of upgraded aggregates

→ Potential sales growth for the customer:
 $60\,000\text{ Tons} \times 12\text{€/T} = 720\,000\text{€}$

GIRON FLAT-TOP SURFACE PRE-FORMING TECHNOLOGY (E)

Before the total wear of the screens, the screening
machine will produce 30% more, meaning
78 000 tons of upgraded aggregates

→ Potential sales growth for the customer:
 $78\,000\text{ Tons} \times 12\text{€/T} = 936\,000\text{€}$

+30% "free production" to sales growth

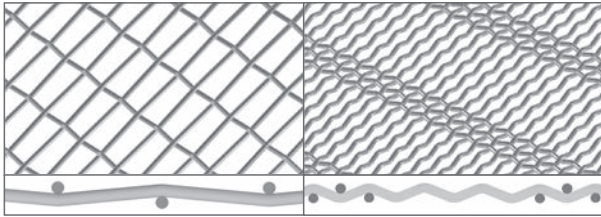
THE GIRON FLAT-TOP SURFACE - THE WARRANTY OF SAVING MONEY

Conventional woven-wire screen

When to choose a rectangular mesh?

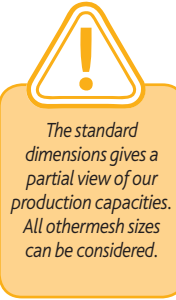
- TO IMPROVE THE SCREEN'S FLOW BY INCREASING ITS WORKING OPEN AREA
- TO REDUCE THE CLOGGING RISK OF A SQUARE MESH
- TO ELIMINATE LONG MATERIALS CONTAINED IN A SCREENED PRODUCT

LONGRILGIRCO / HARPE LONGRILGIRCO

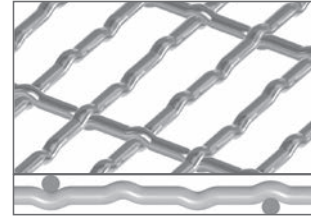


STANDARD RANGE

Mesh: (mm)
0.4 x 1.2
to 15 x 153
Wire: (mm)
0.5 to 3



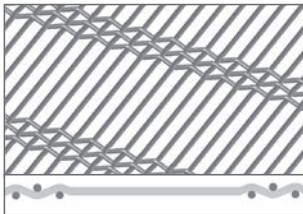
LONPLANGIRCO / HARPE LONPLANGIRCO



STANDARD RANGE

Mesh: (mm)
1.1 x 10
to 90 x 150
Wire: (mm)
1.6 to 20

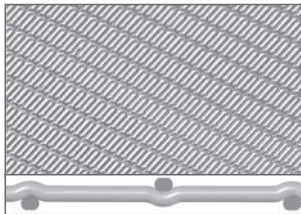
PLANHARPE



STANDARD RANGE

Mesh: (mm)
1 x 50
to 12 x 50
Wire: (mm)
1 to 2.5

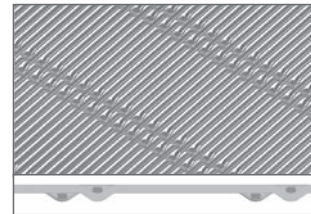
LONMIPLAN



STANDARD RANGE

Mesh: (mm)
0.26x7
to 6.4x13
Wire: (mm)
0.5 to 2.5

PLANFISS



STANDARD RANGE

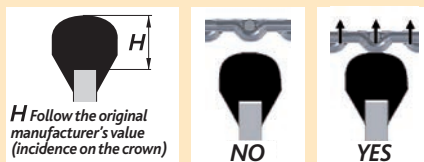
Mesh: (mm)
0.6 x 25
to 6 x 25
Wire: (mm)
0.5 to 2.5

ADVISES TO INCREASE THE SERVICE-LIFE OF A TENSIONED SCREEN

It is required to start the screening machine without load for few minutes for regulating the screen's tensioning. Then a locking adjustment may be

necessary to finalize the correct screen's positioning. It is highly recommended to tighten regularly the tensioning systems to guarantee the most effi-

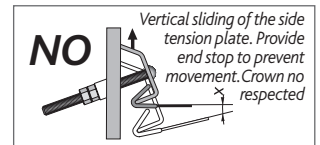
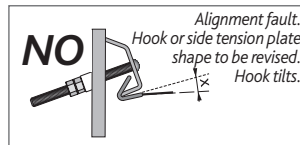
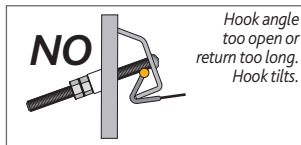
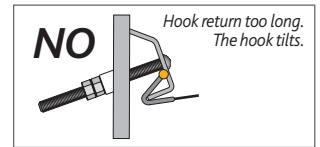
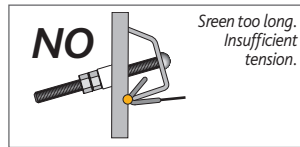
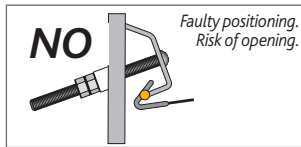
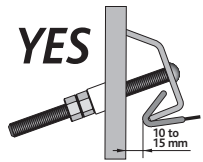
ciency locking of the screen on the deck and get the optimal service-life.



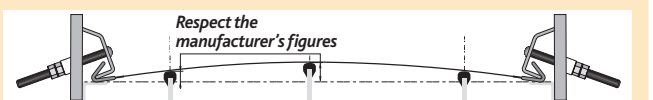
Check that the mesh is in contact with all the supports and that it does not separate from them under the effect of a vertical force. The slightest gap at this point leads to a serious risk of breakage.

The side tension plate should only be in contact with the bottom of the hook.

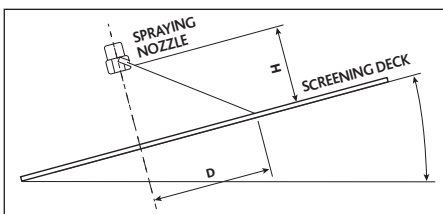
A space of 10 to 15 mm should be observed to allow correct tensioning.



If the screen breaks before normal wear, the wire may be too fragile. A quick on-the-spot checking may prove that.



IN CASE OF BREAKING OR PREMATURE WEAR OF A TENSIONED SCREEN



If the screen breaks before normal wear, the wire may be too fragile. A quick on-the-spot checking may prove that:

- If the screen broke in a straight line along the rubber mountings, it is certainly due to faulty tensioning
- If the screen broke in a certain spot at the feed zone, it is certainly due to the feed rate is too high or not centered.

c) For underwater screening, the water pressure should not exceed 2 to 3 bars (<30-45 psig) to avoid premature wear by grinding. A wide spray will be more efficient than a local jet on the materials to wash.

Anyway, a regular and homogeneous supply of products on all the screen's width allows any overload, increase its service-life and its efficiency.

Self-cleaning screen

Why to choose GIRON screens?

RIGHT ANSWER TO YOUR SCREENING PROBLEMS

- 1-To keep the screening area practically intact** in spite of the presence of fine, humid or argillaceous particles which tend to clog conventional woven-wire mesh.
- 2-To limit or eliminate pegging** on crushed materials.
- 3-To improve the yield** of an undersized screening machine.
- 4-To increase the service life**, especially for underwater screening of highly abrasive fine materials.

SCREEN SERVICE-LIFE

The service-life of woven-wire screens depends on 3 core factors:

1 - The quality of the steel

Considering the importance of the effect of carbon content on the abrasion resistance, GIRON requires 0.5% of carbon as a minimum.

2 - The quality of the design

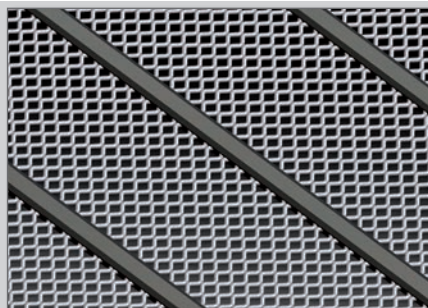
GIRON screens are always defined according to your screening machine; each detail allows us to provide an efficient solution and adapted to your equipment and materials to screen. Our unique experience as inventor (patents in 1951 & 1952) of this self-cleaning solution is a guarantee for you to get the best expertise to resolve clogging problems.

3 - The quality of the screening machine

The right setting up of the screen on the machine is crucial regarding its service-life. It is important to check if the tensioning systems or supports are in good conditions and also if the hooks are correctly tightened to avoid any breaking or premature wear.

BREAKDOWN/EMERGENCY

Our production capacity allows us to secure a breakdown in 5 days maximum for self-cleaning mesh.



ONDAP GOMME *Special version for hot screening*

The ONDAP GOMME screen is the core solution in many screening applications with clogging or pegging problems. It is a technical solution invented by GIRON and patented in 1951.

Its square-mesh's design leads to get a very precise size grading of the screened products, mainly designed to replace conventional meshes in case of pegging or clogging. One of its diagonals is parallel to the materials screening path leading to get a **higher efficiency**.

The screen is composed of **independent high resistance warp wires and reinforced by anti-abrasive rubber strips**.

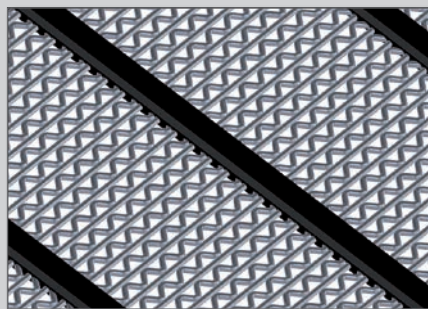
According to the screening conditions, our team can propose you alternative options such as stainless steel wires, lateral material-proof seal, overlapped rubber strip, rubber compatible for food industry, etc.

STANDARD RANGE

$0.8 \leq \text{Mesh} \leq 100 \text{ mm}$
 $0.6 \leq \text{Wire} \leq 7 \text{ mm}$

Clogging = it occurs when the mesh is completely obtruded due to the humidity of «fines particles» into the material during dry screening.

Pegging = it occurs when a material keeps locked in the mesh.



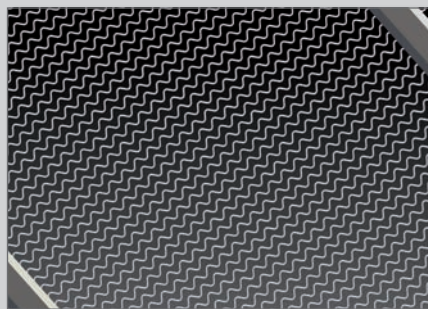
MIXTE GOMME *Special version for hot screening*

In some cases, the ONDAP GOMME screen may be replaced by the MIXTE GOMME screen. It is a technical solution invented by GIRON and patented in 1952.

The alternative of crimped and straight wires leads to get a variation in the vibrations' amplitude. Thanks to this design, the MIXTE-GOMME gets **excellent results against shocks** or when the screen deck may receive **high load of products**.

STANDARD RANGE

$1.6 \leq \text{Mesh} \leq 55 \text{ mm}$
 $1 \leq \text{Wire} \leq 8 \text{ mm}$



ZIG-ZAG GOMME

Our ZIG-ZAG GOMME screen is the solution to get the **best anti-clogging efficiency**, because of the total absence of contact between wires. Due to its design, the best results are reached in end-side tensioning when products go in parallel of the wires.

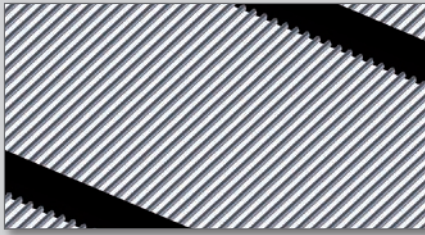
It is crucial to keep in mind the ZIG-ZAG GOMME screen is a real powerful screen mesh. Several technical solutions could be declined from the ZIG-ZAG GOMME to solve screening problems. Our team could give you profitable advises how to define the right screen according to your applications.

STANDARD RANGE

$0.7 \leq \text{Mesh} \leq 60 \text{ mm}$
 $0.6 \leq \text{Wire} \leq 7 \text{ mm}$

Self-cleaning screen

Why to choose GIRON screens?



LONPLAN GOMME

The LONPLAN GOMME screen is mainly use for **materials' de-watering** or as a **degritting grid**. It has also relevant properties for underwater screening. Its design, using high resistance straight wires which are perfectly parallels and offering a whole flat surface, leads to get **uneven mechanical and wear strengths**.

STANDARD RANGE

$0.5 \leq \text{Mesh} \leq 60 \text{ mm}$
 $1.6 \leq \text{Wire} \leq 8 \text{ mm}$



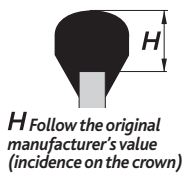
PIANO WIRE

The PIANO WIRE screen is installed in general on mobile screening machines with end-tensioning hooks. It offers **high anti-clogging effect** and screening efficiency. However, its mesh may not be precised enough in some applications. The sliding plastic profiles highly facilitate the assembly in the screening machine.

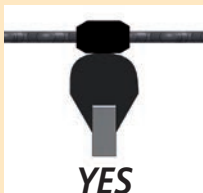
STANDARD RANGE

$1 \leq \text{Mesh} \leq 30 \text{ mm}$
 $0.8 \leq \text{Wire} \leq 3 \text{ mm}$

ADVISES TO INCREASE THE SERVICE-LIFE OF A TENSIONED SCREEN

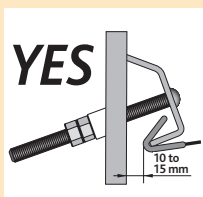


Check that the mesh is in contact with all the supports and that it does not separate from them under the effect of a vertical force.



The slightest gap at this point leads to a serious risk of breakage.

The side tension plate should only be in contact with the bottom of the hook.

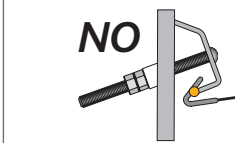


A space of 10 to 15 mm should be observed to allow correct tensioning.

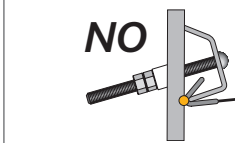
It is required to start the screening machine without load for few minutes for regulating the screen's tensioning. Then a locking adjustment may be necessary to finalize the correct screen's positioning.

It is highly recommended to tighten regularly the tensioning systems to guarantee the most efficiency locking of the screen on the deck and get the optimal service-life.

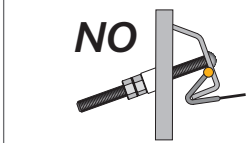
Faulty positioning. Risk of opening.



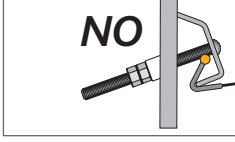
Screen too long. Insufficient tension.



Hook return too long. The hook tilts.



Hook angle too open or return too long. Hook tilts.



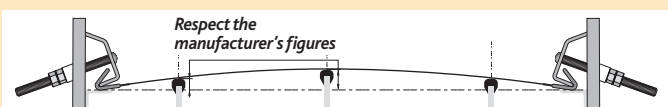
Alignment fault. Hook or side tension plate shape to be revised. Hook tilts.



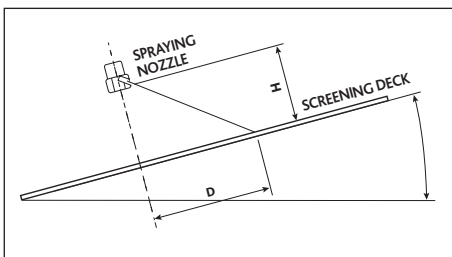
Vertical sliding of the side tension plate. Provide end stop to prevent movement. Crown no respected.



If the screen breaks before normal wear, the wire may be too fragile. A quick on-the-spot checking may prove that.



IN CASE OF BREAKING OR PREMATURE WEAR OF A TENSIONED SCREEN



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- If the screen broke in a certain spot at the feed zone, it is certainly due to the feed rate is too high or not centered.

c) For underwater screening, the water pressure should not exceed 2 to 3 bars (<30-45 psig) to avoid premature wear by grinding. A wide spray will be more efficient than a local jet on the materials to wash.

Anyway, a regular and homogeneous supply of products on all the screen's width allows any overload, increase its service-life and its efficiency.

Alternative steel mesh

Why to choose GIRON?



SCALDUR GRIDS

Made from special steels, these grids are relevant to receive **heavy aggregates** (scalping). With high performance against wear, the SCALDUR can accept heavy loads and can also reach **better efficiency** compared to rubber screens or perforated steel plates.

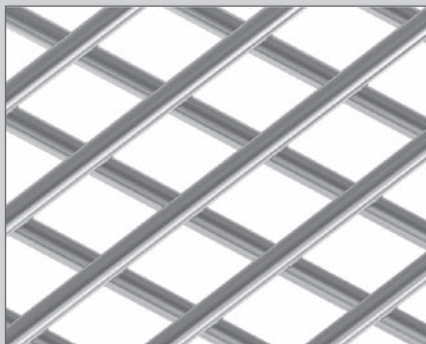
These grids are made up of Ø16 or Ø20 mm rods welded to 25x12 rectangular sections. The rods are always installed on the top face and parallel to the material's flow.

The steels used are of the silica-manganese type. This quality level led GIRON to develop a specific welding process to guarantee the mechanical strength of the complete assembly.

Unlike conventional welded screens, the SCALDUR is always made on the basis of the screening machine deck's dimensions then as to optimize the open area and ensure the protection of the cross pieces and supports of the screening machine.

STANDARD RANGE

40 ≤ Mesh ≤ 150 mm
 Rods: 16 mm / 20 mm
 Rectangular sections:
 25 x 12 mm



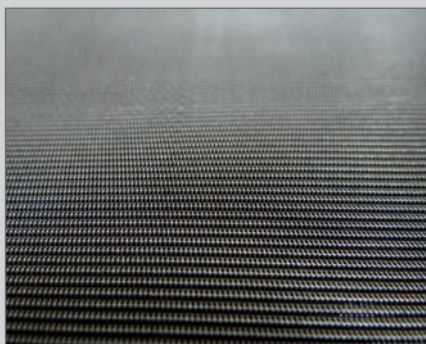
WELDED GRIDS

These meshes are made up of crossed welded rods. The top face is always installed parallel to the materials' flow.

These screens are generally intended for screening low abrasive material mainly due to the low carbon content and smoothness of steels used. Rectangular meshes of all sizes are also produced to order.

STANDARD RANGE

5 ≤ Mesh ≤ 150 mm
 3 ≤ Wire ≤ 25 mm



STEEL WIRE CLOTHS

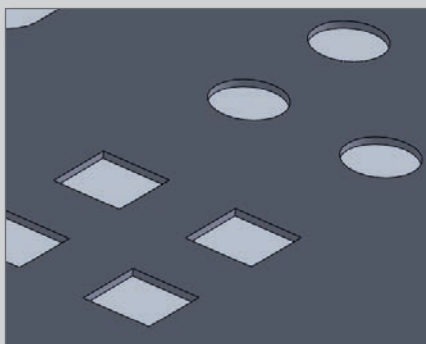
The wire cloths are mainly intended for very fine and ultrafine screening of low abrasive materials, as used in the chemical and agro-food industries.

304L stainless steel is the most commonly used, however it is possible to manufacture from other grades.

These cloths can be delivered raw edge, under rolls or panels, with polyurethane seals, eyelets for fixing and/or tension hooks for installation on a screening machine.

STANDARD RANGE

0.02 ≤ Mesh ≤ 8 mm
 0.02 ≤ Wire ≤ 1.25 mm



PERFORATED STEEL PLATES

These plates can be fitted with tension hooks or with holes for bolting to frame. They can be delivered flat or pre-curved but also bent in several sectors for equipping trommels.

Grades R250, CR321 and CR4000 are special abrasion resistant steels.

Thicknesses available extend from 2 to 15 mm depending on grades and perforations' type.

STANDARD RANGE

0.5 ≤ Mesh ≤ 100 mm
 2 ≤ Thickness ≤ 15 mm

Wedge wire screens

Why to choose GIRON?

MAIN CONCERN

The wedge wire screens made of looped and wedge stamped wires have been designed and manufactured by GIRON for more than 50 years. They are intended for **dewatering, drying and filtering materials** such as sands, aggregates, limestone or coal. They are especially used in mines, quarries and sand quarries for separating solid/liquid materials.

These screens can be delivered in several industries as the fluids' filtering (used waters, industrial oils recycling, wine) or also for food industry (sugar refinery).

TECHNICAL ISSUE

The technical know-how developed by GIRON consists in stamping a trapezoidal section from a stainless steel wire. These precise profiles are assembled all together on Ø7 mm rods getting a 70mm constant thread. This process gives the **guarantee to get the best slot accuracy**, especially for very fine slots.

Screens may be delivered flat or curved, with or without reinforced elements such as steel sections or angles or any other accessories.

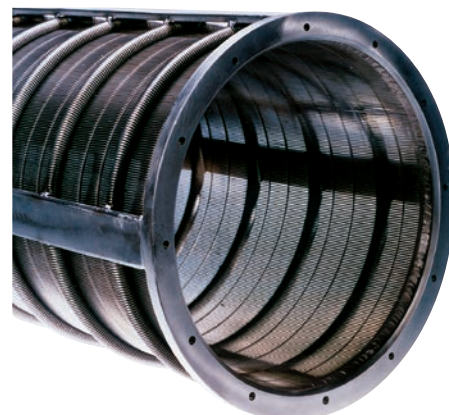
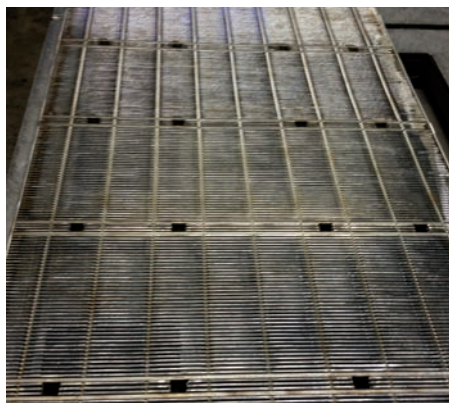
SERVICE/AVAILABILITY/BREAKDOWN

Our in-site technical sales team is not available only for business purposes. They can provide you relevant advice for selecting with you the most profitable solutions to optimize your production efficiency.

GIRON Company daily continues to listen about your feedbacks and keeps available to share with you on our past experience if applicable.

INFORMATION TABLES ABOUT OPEN AREA AND WEIGHT PER SQM

Narrow profile	22 E 1,5 3,4	28 E 1,8 4,4	35 E 2,4 5,2			50 E 3,5 7,5
Normal profile	22 1,7 3,2	28 2,2 4,2	35 2,6 5,1	42 3,1 6,5	45 3,5 6,5	
Large profile	22 L 2 3	28 L 2,4 4	35 L 2,8 5	42 L 3,4 6	45 L 3,7 6,3	50 L 4 7
Normal profile with wear reserve	22 R 1,7 3,2	28 R 2,2 4,2	35 R 2,6 5,1	42 R 3,1 6,5	45 R 3,5 6,5	50 R 3,7 7,5
Large profile with wear reserve	22 RL 2 3	28 RL 2,4 4	35 RL 2,8 5	42 RL 3,4 6		



AVAILABLE RANGE

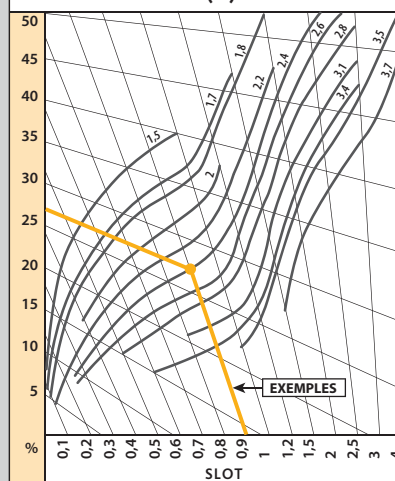
Our range starts from 0.1 mm and increments every 0.1 mm following slot curves.

The orange bold lines show the slots manufactured with contact points.

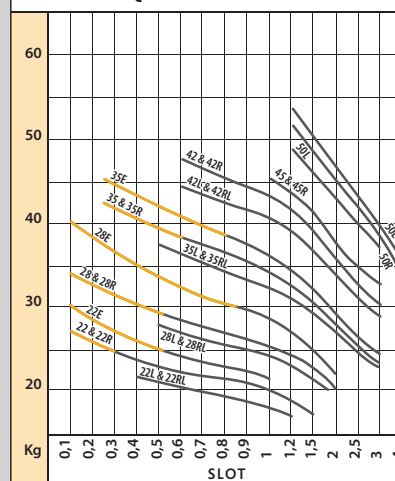
Standard steel used:

- Stainless steel according AFNOR Z 8 C17 - AISI 430 Standards
- Stainless steel according AFNOR Z 7 CN 18.09 - AISI 304 Standards
- Stainless steel according AFNOR Z 3 CND 17.11.02 - AISI 316L Standards

OPEN AREA (%) VS SLOT



WEIGHT PER SQM OF NON-REINFORCED SCREEN



POLYURETHANE QUALITY

The anti-abrasive polyurethane used for manufacturing our screens is one of the best in the market. The chemical raw materials offer excellent performances against wear; basically x10 to x15 service-life of steel mesh. These inherent properties reduce seriously the periodicity of meshes' replacement, but also reduce widely screening noise level of your installations.

INTERNAL QUALITY PROCESS

All our internal quality processes lead to manufacture and deliver high performance products. We daily make every effort to guarantee the optimized finishing to reach the longer service-life of our products.

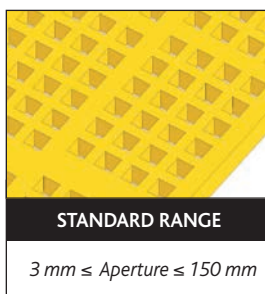
BREAKDOWN

The integral control in-site of our manufacturing process and our production capabilities allow GIRON tiding you over polyurethane screens within 5 days.

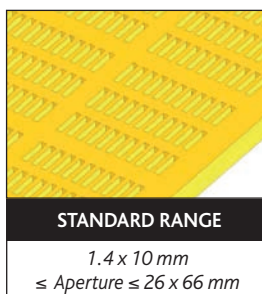
SEVERAL MESHES TYPE AVAILABLE

All meshes can be delivered in line or in staggered rows.

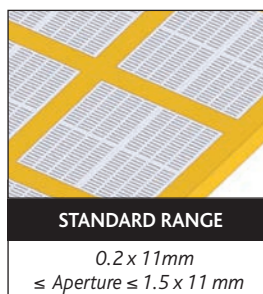
Square mesh



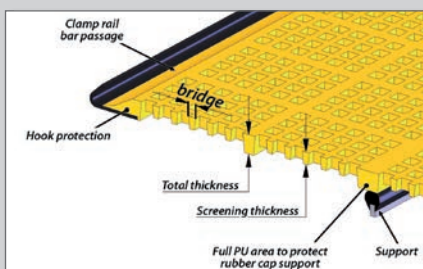
Rectangular mesh



Slot mesh



The standard dimensions gives a partial view of our production capacities. All other mesh sizes can be considered.

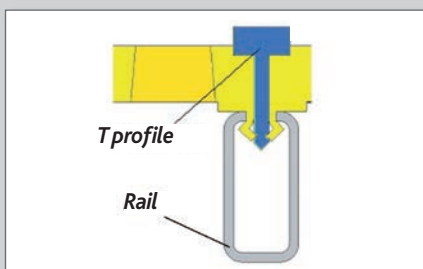


TIGHT OR BOLTED SCREENS

In case of you want to increase the service-life of your conventional steel mesh screens, without any mechanical modifications of the screening machine, the anti-abrasive polyurethane screen is a relevant solution. However, this evolution

will affect the yield of the deck (roughly -30% compared with steel mesh).

If you want keeping the efficiency, GIRON suggests you the POLYMIXTE, exclusive concept which offers permeability and service-life.

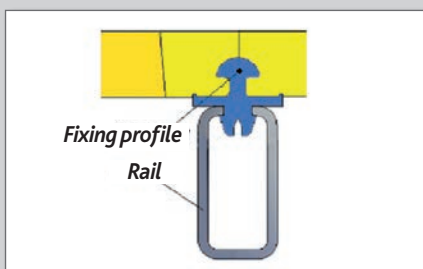


MODULAR SYSTEM BY «T-key» BAR - «MGI» patented by GIRON in 1992

- Simple and quick assembly in rail
- Strong assembly by «T-key» bar
- Well adapted for cramped spaces
- Integrated deflector
- All standard available

The modular system MGI is composed of:

- a steel rail (40x40 or 40x80)
- a standard MGI module (300mm width)
- a lateral MGI module adapted to your machine
- a «T-key» bar
- fitting accessories



MODULAR SYSTEM BY FIXING PROFILE - «MIG»

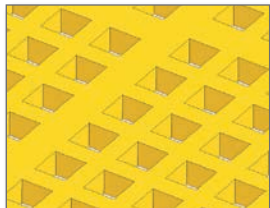
- Tight assembly by wedge, already fitted in the rail
- Strong assembly by fixing profile
- All standard available

The modular system MIG is composed of:

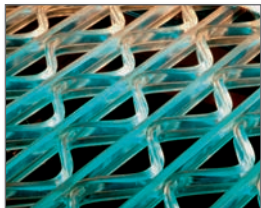
- a steel rail (40x40 or 40x80)
- a standard MIG module (300mm width)
- a lateral MIG module adapted to your machine
- a fixing profile
- fitting accessories

SEVERAL MODULES SELECTION

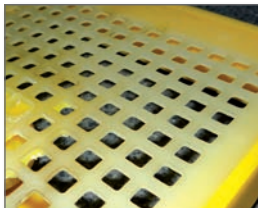
100% POLYURETHANE



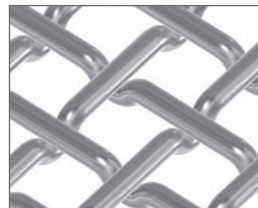
POLYMIXTE



POLYFLEX



STEEL MESH

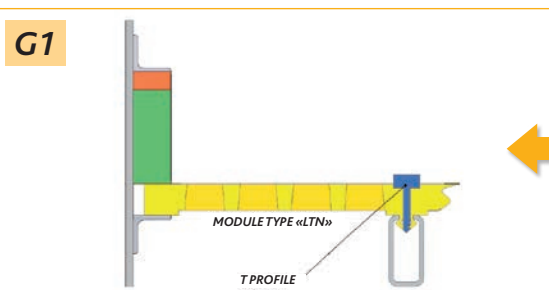


SELF CLEAN MESH

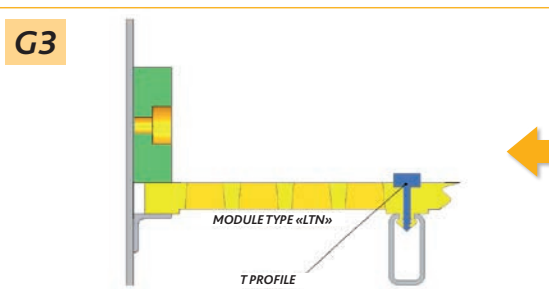


SEVERAL ASSEMBLY OPTIONS

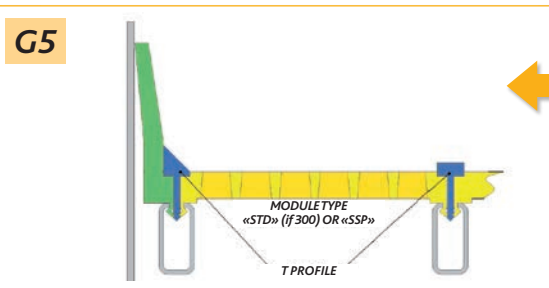
MGI Basis



PROTECTION
BAR + WEDGE

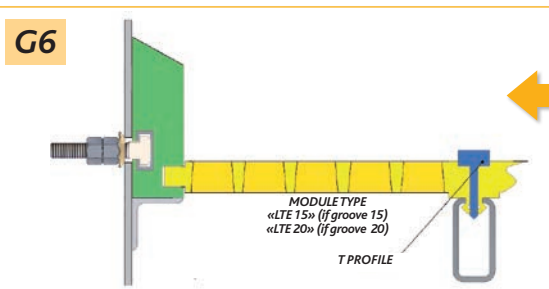


BOLTED
PROTECTION BAR



INTEGRATED MGI
PROTECTION BAR

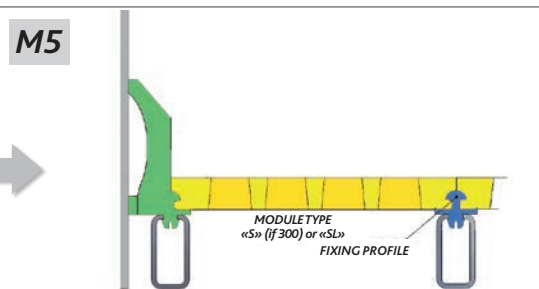
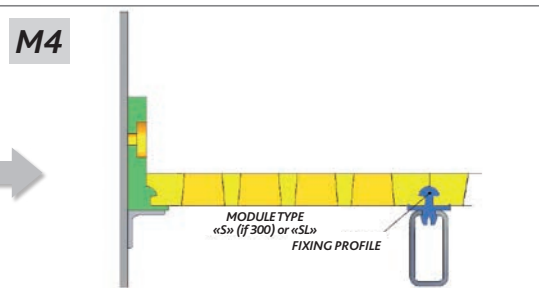
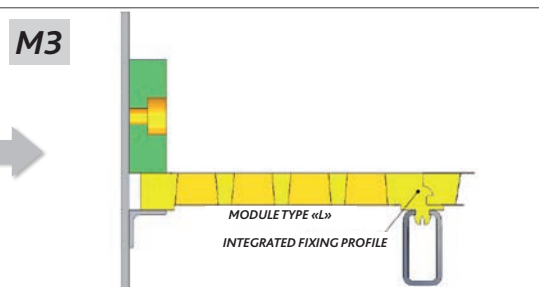
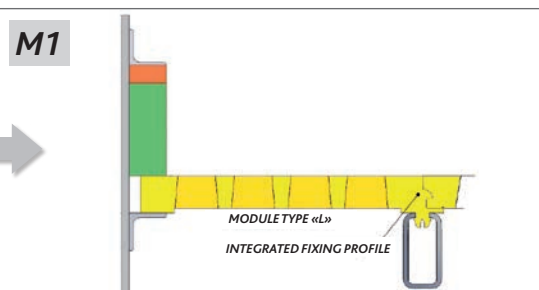
BOLTED
PROTECTION BAR
WITH INTEGRATED
FIXING PROFILE

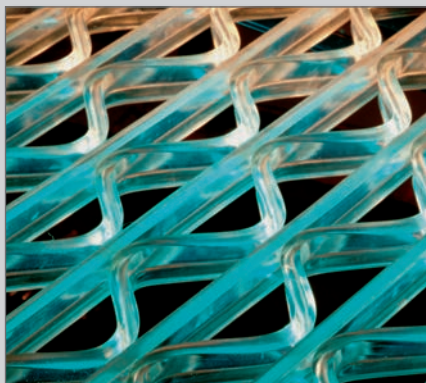


R15/R20 BOLTED
PROTECTION BAR

LATERAL
PROTECTION BAR
WITH INTEGRATED
FIXING PROFILE

MIG Basis





POLYMIXTE *The dual technology combination*

Invented and patented in 1997 by GIRON, this exclusive concept is an innovative reply to several screening questions:

- To increase the service-life of your conventional woven-wire screens while keeping the screening yield
- To improve the yield of polyurethane screens
- To optimize the elimination of run-off water on a deck equipped with polyurethane screens

Certified cost-effective solution

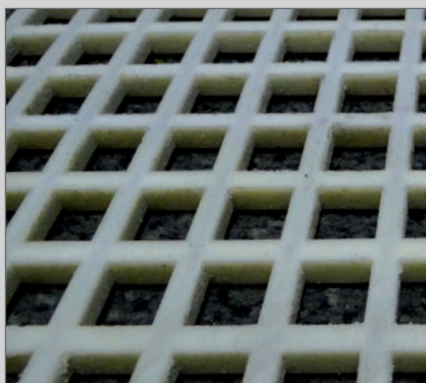
- **Permeability x2** of your polyurethane installations
- **Service-life x8** of your conventional steel mesh

These screens can be equipped with hooks (lateral or end-tensioning), mounted on frame or produced in modular systems. The POLYMIXTE offers profitable solutions to replace your standard equipment in case of screening without clogging or pegging problems.

STANDARD RANGE

$4\text{ mm} \leq \text{Mesh} \leq 28\text{ mm}$

*4 different profiles
selected by us
according to
your applications.*



POLYTECH

The tensioned POLYTECH screen could be considered as an efficient anti-clogging polyurethane solution. The screen is very flexible and lightweight. It could mainly be characterized by:

- High efficiency (equivalent to steel mesh)
- High service-life (up to x5 compared to steel mesh)
- High Simplicity for installation (lightweight and roll up)

Optimized anti-clogging version is also available for meshes < 10 mm.

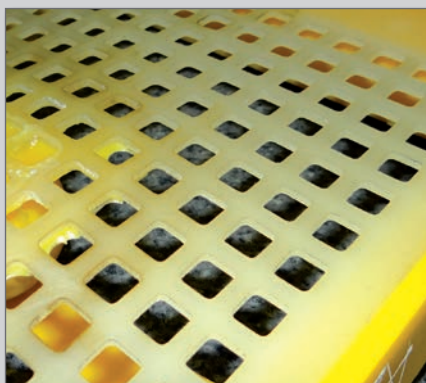
It is important to understand the max aggregates' sizes received on the POLYTECH shall not exceed twice the mesh.

Example: for a requested mesh at 6 mm, the max products size to fall on the screen is 12 mm.

STANDARD RANGE

$2\text{ mm} \leq \text{Mesh} \leq 15\text{ mm}$

*Maximum dimensions:
2 500 mm x 1 500 mm*



POLYFLEX

Basically named «Drum skin», this solution has been existing for a long time. The POLYFLEX is composed of a thin perforated polyurethane membrane which is prestressed on a rigid polyurethane frame (modular system).

The polyurethane chemical formula used to manufacture this membrane is totally different than conventional polyurethane screen or module. This solution is mostly proposed in modular system for screening clogging materials, and where the yield consideration is higher than wear resistance.

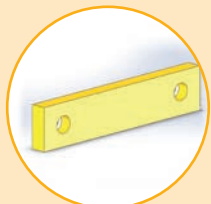
The POLYFLEX could be supplied as a tensioned screen. In this case, GIRON suggests you to select the POLYTECH which will give you better benefits with a profitable quality-price ratio.

It is important to understand the POLYFLEX does not accept too heavy load.

STANDARD RANGE

$1.6\text{ mm} \leq \text{Mesh} \leq 60\text{ mm}$
 $1.5\text{ mm} \leq \text{Thickness} \leq 5\text{ mm}$

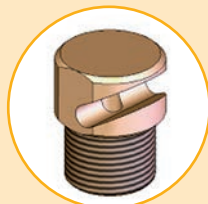
Examples of accessories delivered by GIRON and required for profitable screening.



Rubber or polyurethane lateral protections



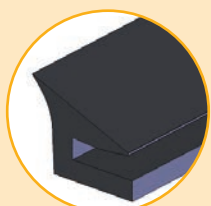
Polyurethane protection tube for spraying ramp



Spraying nozzles



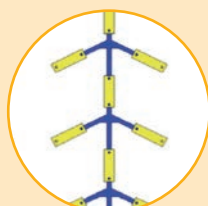
Overlapped and anti-dust sheet rolls made of anti-abrasive rubber



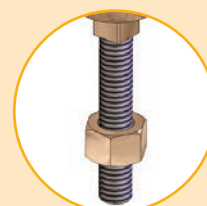
Rubber seal for meshes mounted in end-tensioning system



Range of deflectors for guiding product on screening area



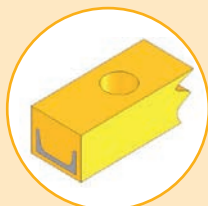
Anti-clogging accessories (balls, garlands, rods)



Bolt accessories



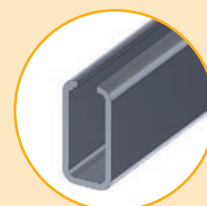
Champ rail bar in anti-abrasive steel, rubber or polyurethane plated



Central fixing ramp in anti-abrasive steel, rubber or polyurethane



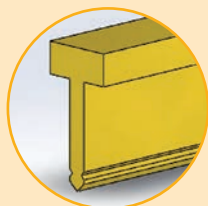
Anti-abrasive rubber profiles



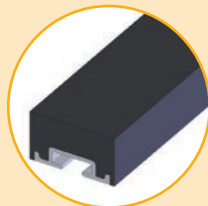
Rail for modular systems



A.M.O. profile for steel or Polymixte mesh (MGI modular system)



Polyurethane «T-key» bar (MGI modular system)



Impact rods made of anti-abrasive rubber



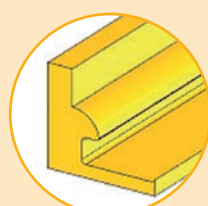
Armor-plated square pads made of anti-abrasive rubber or polyurethane



Polyurethane wedge



Polyurethane lateral protection with fixing profile (modular systems MGI or MIG)



Side fixing profile for MIG module



Central fixing profile for MIG module

QUALITY OF QUENCHED AND TEMPERED MARTENSITIC STEEL - HARDOX®

World brand awareness

Constant and guaranteed performance during the whole service life of the part in the most extreme abrasion applications.

Exceptional technical capabilities combining hardness, crack tolerance, Workshop performance.

QUALITY OF SERVICE

GIRON provides a full feedback of the raw material used.

A constant stock of standard sheets allows us to offer an efficient breakdown service with a warranty of short delivery time.

Giron is your convenience partner through a qualified and available team for your screening and technical parts required in your facilities.

FULL RANGE TO SOLVE YOUR WEAR PROBLEMS

STANDARD DIMENSIONS OF WEAR PLATES (MM): 2 000 x 1 000 - 2 500 x 1 250 - 3 000 x 1 500 (Other dimension upon request)

HARDOX 400

405 HB (420 HV / 42 HRC)
1245 MPa

- Heavy abrasion
- High crack tolerance
- Easy profiling and machining

APPLICATIONS : Crusher liners, reclaimer buckets, Chute liners, bunker liners

DIMENSION DATA

Thickness: 3 to 130 mm
Max width ≤ 3,35 m
Max length ≤ 14,5 m

HARDOX 450

450 HB (478 HV / 47 HRC)
1410 MPa

- +15% hardness and yield strength compared to Hardox 400
- Heavy abrasion
- High crack tolerance
- Easy profiling and machining

APPLICATIONS : Crusher liners, reclaimer buckets, Chute liners, bunker liners

DIMENSION DATA

Thickness: 3,2 to 80 mm
Max width ≤ 3,35 m
Max length ≤ 14,5 m

HARDOX 500

500 HB (532 HV / 51 HRC)
1580 MPa

- Heavy abrasion
- High performance for friction wear
- High crack tolerance

APPLICATIONS : Crusher liners, reclaimer buckets, Chute and bunker liners, blades

DIMENSION DATA

Thickness: 4 to 80 mm
Max width ≤ 3,35 m
Max length ≤ 14,5 m

HARDOX 600

600 HB (638 HV / 57 HRC)
1940 MPa

- Heavy abrasion by friction and sliding wear

APPLICATIONS : Mixer liners, wear strips, liners, Hammers, shredder knives, feeders

DIMENSION DATA

Thickness: 8 to 50 mm
Other dimension upon request

HARDOX EXTREME

700 HB

- Heavy abrasion by friction and sliding wear

APPLICATIONS : Mixer liners, wear strips, liners, Hammers, shredder knives, feeders

DIMENSION DATA

Thickness: 8 to 25 mm
Other dimension upon request

HARDOX HITUF

350 HB

- Wear plate for shocks and friction
- High crack resistance
- High welded capability

APPLICATIONS : Cutting edges, rippers

DIMENSION DATA

Thickness: 40 to 160 mm
Max width ≤ 3,35 m
Max length ≤ 14,5 m

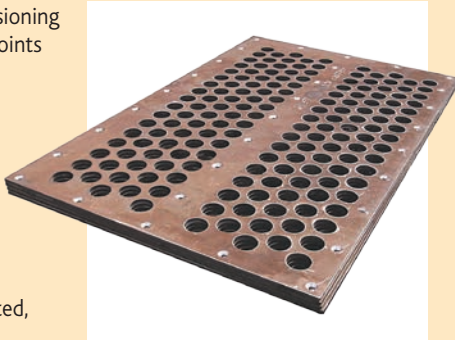
Through several tests made in the field, it is possible To increase your wear parts service life.

The use of Hardox 450 wear resistance steel may increase the service life to +25% and up to +50% compared to a 400 HB other steels available in the market, accordingly to materials processed in your installations.

WHAT GIRON PROPOSES:

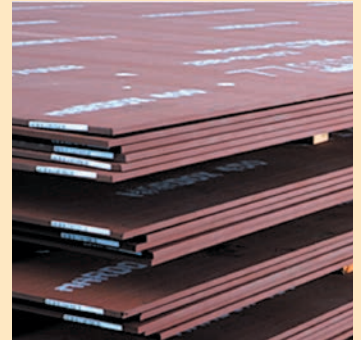
PERFORATED PLATES

- Equipped with tensioning hooks or bolting points
- Delivered plane, curved or waisted in several sections
- Several thickness and grade quality available
- All types of mesh : square, round, slotted, hexagon



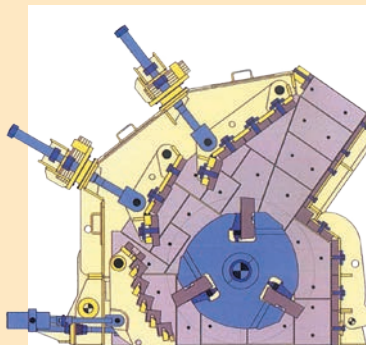
SOLID SHEETS

- Standard or customized dimensions
- Several thickness and grade quality available (Hardox, Weldox, Overlay)
- Constant stock and traceability



TAILORING PARTS

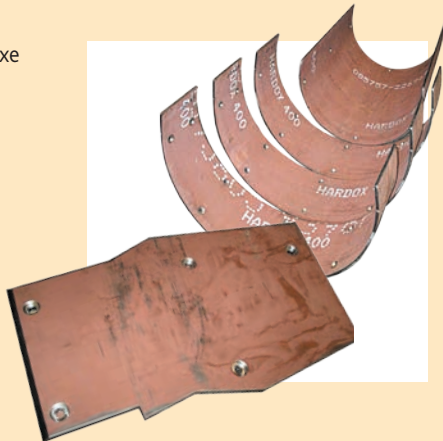
- Various applications on fixed and mobile equipments in quarry industry:
 - Crushers
 - Screening machines
 - Liners
 - Mixers
 - Feeders
 - Hoppers



- Workshop service:
 - Milling
 - Turning
 - Boring
 - Holing
 - Counterboring (thrust, CC, Oblong, pin, tapping)



- Simple and complexe wear parts:
 - Shielding
 - Ferrule
 - Insert
 - Cover
 - Cone
 - Drawer



- Finishing works through drawings:
 - Cutting
 - Bending
 - Welding
 - Simple welded subunits



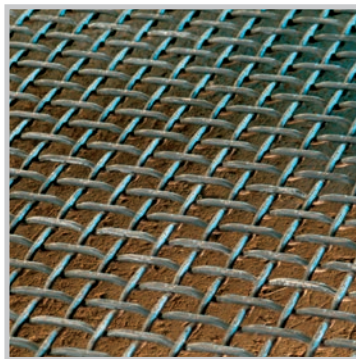
WIRE SCREENS

GIRON

Steel-Polyurethane-Rubber



GIRON A complete range



Conventional screens

Starting from a high-resistance steel wire, Giron produces an infinite range of square and rectangular meshes combining, depending on the performances sought: crimped, stamped wires with a flat surface, welded wires, etc.

For square meshes, the range extends from 0.7 mm aperture (GRILGIRCO) to 200 mm (PLANDUR).

Rectangular meshes available from widths of 0.25 mm (LONMIPLAN) to 100 mm (LONPLANDUR) have a length representing 1.5 to 50 times the width.

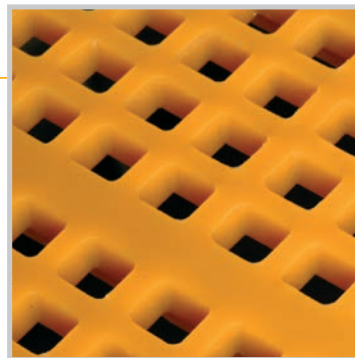


Anticlogging screens

The ONDAP GOMME screen patented in 1951 was designed to prevent clogging and pegging.

A Giron flagship product, it is composed of independent warp wires held by one weft wire embedded in rubber.

For even more demanding performances, the range is completed by MIXTE GOMME and ZIGZAG GOMME screens.

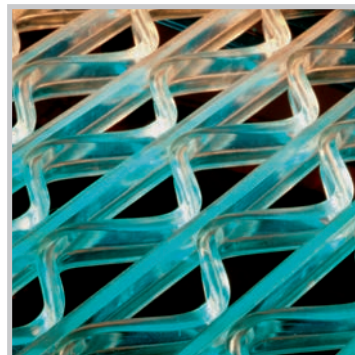


Polyurethane screens

These screens made from several polymer hardnesses are especially intended for very strong abrasions.

These screens are "tensioned or bolted" types, but they can also be "modular" for a very quick installation and removal (Giron 1992 patent).

The Giron range extends from square or rectangular meshes of 0.2 mm to 120 mm.



Composite screens

Patented in 1997, the POLYMIXTE screens combine an open area of steel mesh with a service life of polyurethane.

The screens are in fact made with a high-resistance steel section coated with a trapezoidal polyurethane layer.

Rubber screens

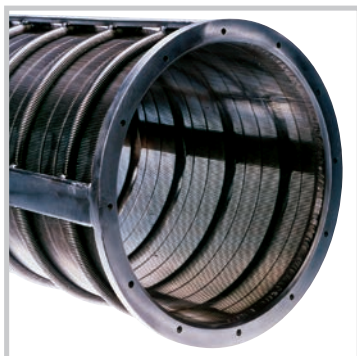
Made from anti-abrasive rubber, the mesh range extends from 10 mm to 150 mm.

These screens can be produced in mountings under side or end tensioning as well as in bolted panels with an integrated reinforcement.



Perforated plates

For some applications, a perforated plates range made of anti-abrasion steel is proposed in 2.5 mm to 15 mm thickness.



Wedge wire screens

The wedge wire screens made of looped wires are manufactured with trapezoidal sections for draining, drying or filtering.

We make all mesh sizes starting from 100 microns; these screens can be flat or curved.



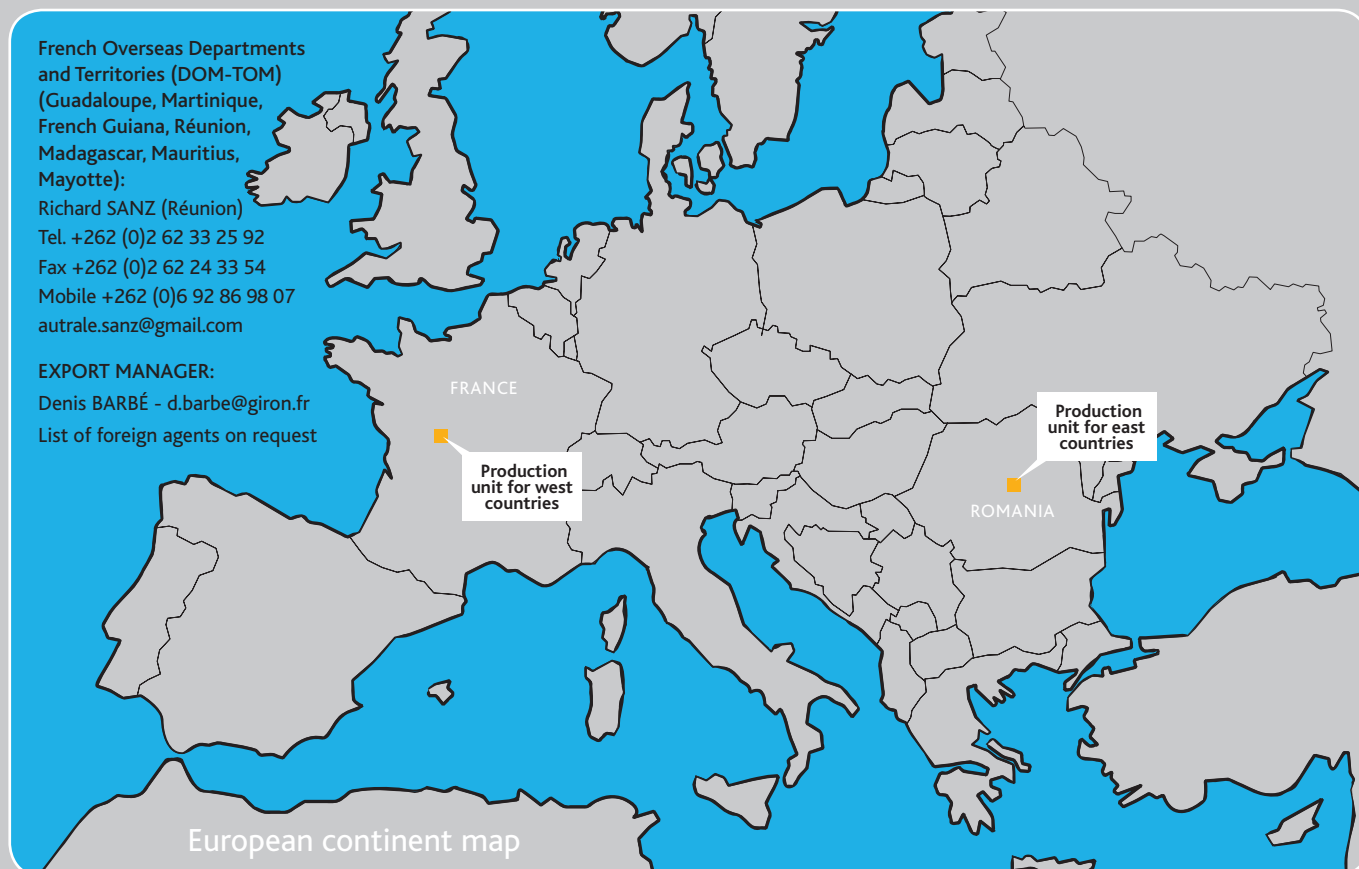
Accessories

Giron proposes as a full complement to screens the majority of the accessories found in the environment of screens : protective rubber for supports, clamp rail tensioners, bolts and screws, spraying nozzles, middle fixing, PU fastening side bar, PU wedge profile, deflectors, modular mounting rails, etc.

GIRON *A wide sales reactivity*

Giron's commercial organization is committed to assist its customers in repair work.
Usual delivery time for breakdown service:

- within 24 hours or 48 hours for conventional screens with current meshes ;
- Within a week for anticlogging or polyurethane screens.



WIRE SCREENS
GiRON
Steel - Polyurethane - Rubber

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