Other Products and Accessories

12

NUBA Screening Media


NUBA
Screening Media

Abrasion-resistant lining

Anti-abrasive linings are used to avoid excessive wear on exposed metallic surfaces which are in contact with abrasive materials; you find this in pipes, ducts, hoppers, trommels, cyclones, mills, etc. They are also used to resist high impact and reduce noise levels.

The materials used in these linings have to be very abrasive-resistant and easy to replace when worn.

The main materials used for this, for their mechanical properties, are rubber and polyurethane.

Polyurethane abrasion-resistant linings:

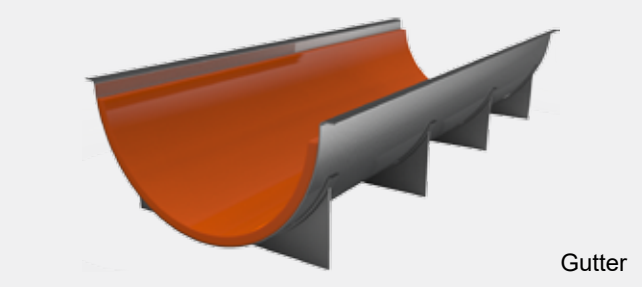
- **Polyurethane panels** (without metallic structure).
- **Polyglue®:** Is a metallic plate base that comes in any thickness required lined with polyurethane. The metallic plate allows it to be easily screwed on to any surface.
- **Polyurethane Deploye:** Is a polyurethane panel with an expanded metal sheet inside which allows it to be screwed on to a surface, but gives it flexibility to cover curved surfaces.

Rubber abrasion-resistant linings:

- **Rubber Plates** (with-out metallic structure).
- **Rubber with metallic plate.**

Made from abrasion-resistant rubber with thicknesses up to 40 mm.

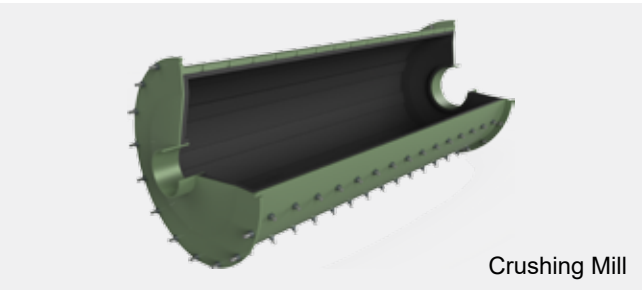

Piping


Gutter


Hopper


Trommel


Hydrocyclone


Crushing Mill

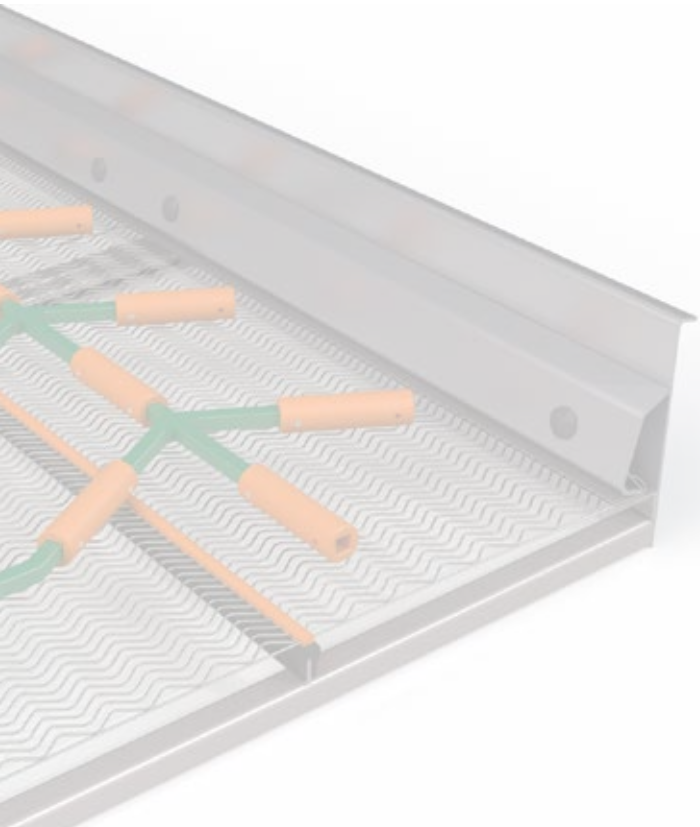
Declogging rods

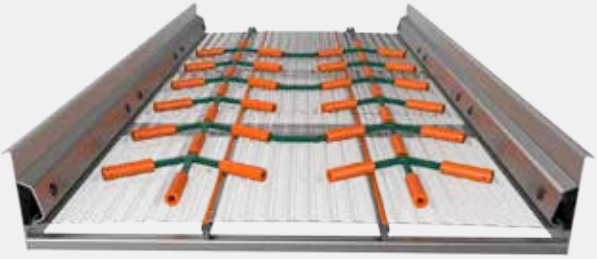
Declogging rods are elastic polyurethane rods that are fixed to the screen. They use the machine's vibration to move and bounce on the surface of the mesh, avoiding particles wedging and blinding the screen.

Screen width	Components
Up to 1000	1 Declogging rod
1000 ÷ 1500	2 Declogging rods
1500 ÷ 2000	3 Declogging rods

Screen length	Components
Up to 1500	1 Fixed rod and 2 mobile rods
Up to 2000	1 Fixed rod and 3 mobile rods
Up to 2500	1 Fixed rod and 4 mobile rods
Up to 3000	1 Fixed rod and 5 mobile rods
Up to 3500	1 Fixed rod and 6 mobile rods
Up to 4000	1 Fixed rod and 7 mobile rods
Up to 4500	1 Fixed rod and 8 mobile rods

NOTE: To avoid tangling of separate declogging rods, they are joined using separators, according to the number of mobile rods.
We do not recommend their use when screening with metallic meshes with a wire diameter smaller than 2.5 mm.





Components:

Fixture

Fixed rod

- 1 PU Arm
- 1 PU Cylinder
- 1 Pin

Mobile rod

- 1 PU 3-way Arm
- 3 PU Cylinders
- 4 Pins

Separator

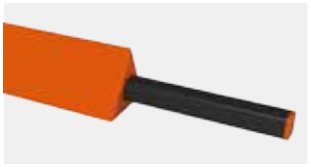
- 1 PU Arm
- 2 Pins

Separator lengths:
- 135 mm
- 400 mm

Conveyor belt scraper

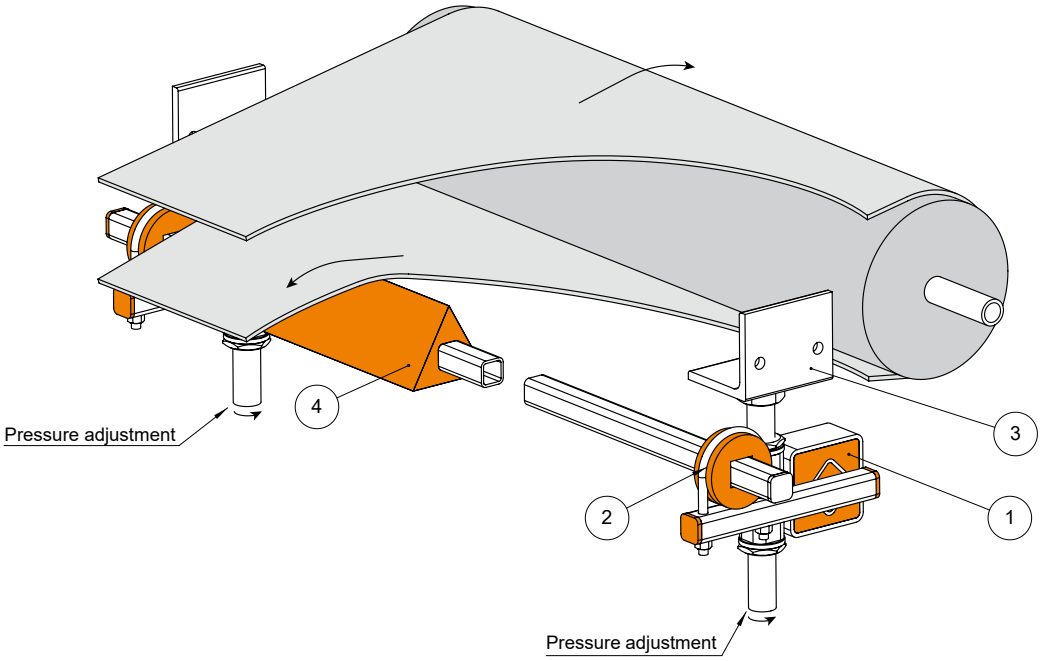
For the correct maintenance of conveyor belts a secondary scraper should be incorporated just after the drive pulley.

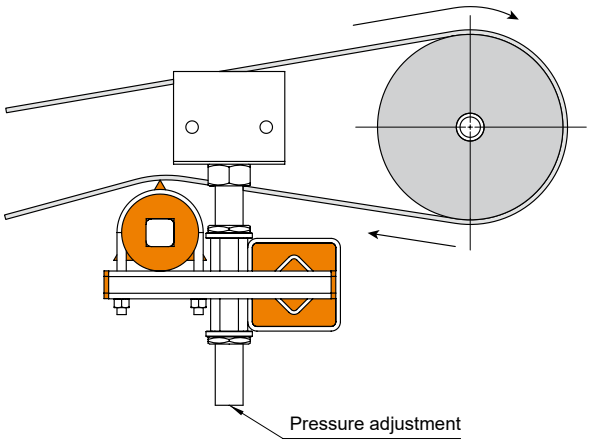
T-shaped scraper blade

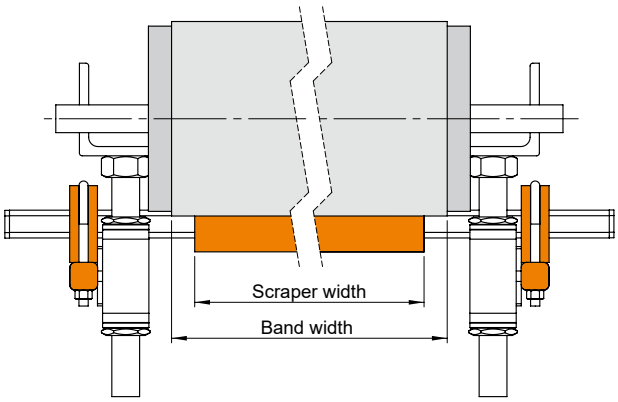


Triangular scraper blade

Tungsten scraper blade







(1) Silentblock (2) U-bolt (3) Support (4) Triangular scraper blade (or choose from existing models)

Dimensions

Conveyor belt width A	Scraper width B
500	500
650	625
800	750
1000	950

Conveyor belt width A	Scraper width B
1200	1150
1400	1300
1600	1500
2000	1850

Polyurethane Accessories

NUBA Screening Media currently has sufficient means to make any technical part in Polyurethane.
The technical department designs each mould for the correct manufacture of each accessory to the precise specification of the client, the most usual parts are:

Cyclone liners

Lining cones to protect the inside walls of the hydrocyclone.

Wheels

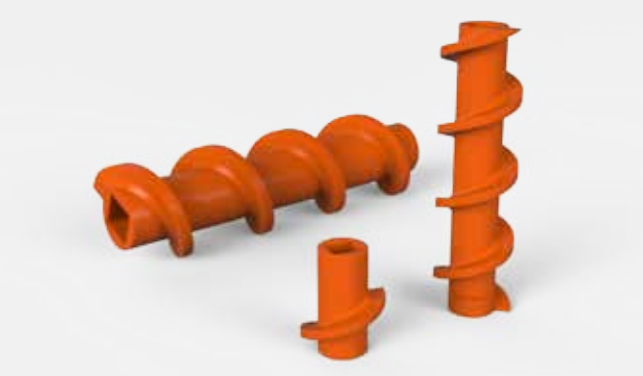
As wear-resistant treads.

Hammers

Recommended for the correct installation of the TN® modular system.

Conveyor screws

PU components for silo mixers.

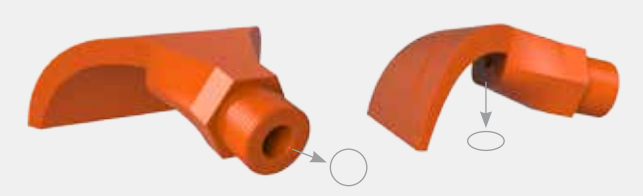


Conveyor belt safety skid

Safety skid replacement part for rollers on conveyor belts.

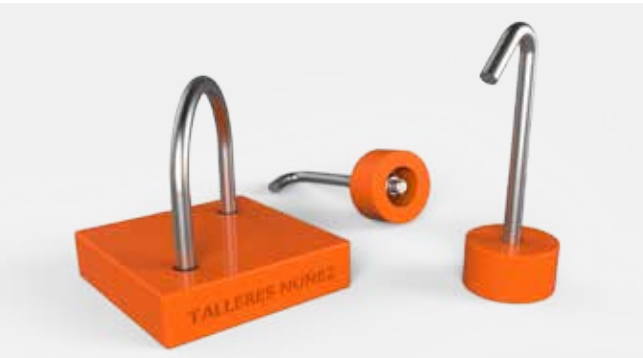
Spray Nozzles

Especially designed by TN working with a circular flow admission and an elliptical flow expulsion which enhances the spray angle of the water fan; they have a reinforced structure for greater durability.
Coupling sizes: 3/4” and 1/2”.



U and J-bolts

Clamping of screening media.



Disc tracker for conveyor belts

Mounted on rollers to centre conveyor belts.

PU knocking balls

For ball trays systems, to clean clogged meshes.

Plugs

For protection of screw heads or bolts.

PU Lined tension plates

Tension plates covered in PU lining to extend working life.

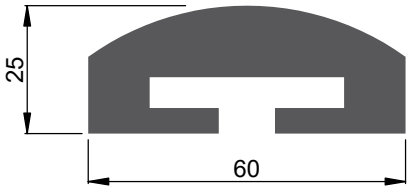
Snow plough blades

Polyurethane is an excellent material for snowplough blades since it has high anti-abrasive properties, flexibility, and strength and does not damage asphalt.

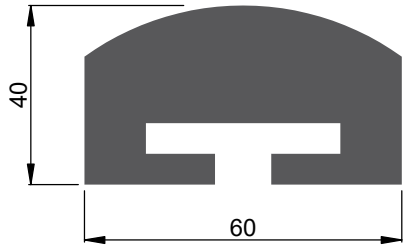
NUBA Screening Media has great experience in the development of technical parts in Polyurethane and is able to offer custom made parts to suit any machine brand in the market. All products made by **NUBA Screening Media** follow the highest quality standards.

Rubber Accessories

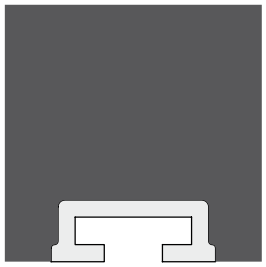
Rubber profiles for central hold-down bar

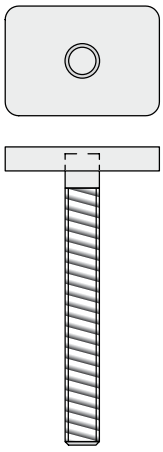


Normal rubber profile



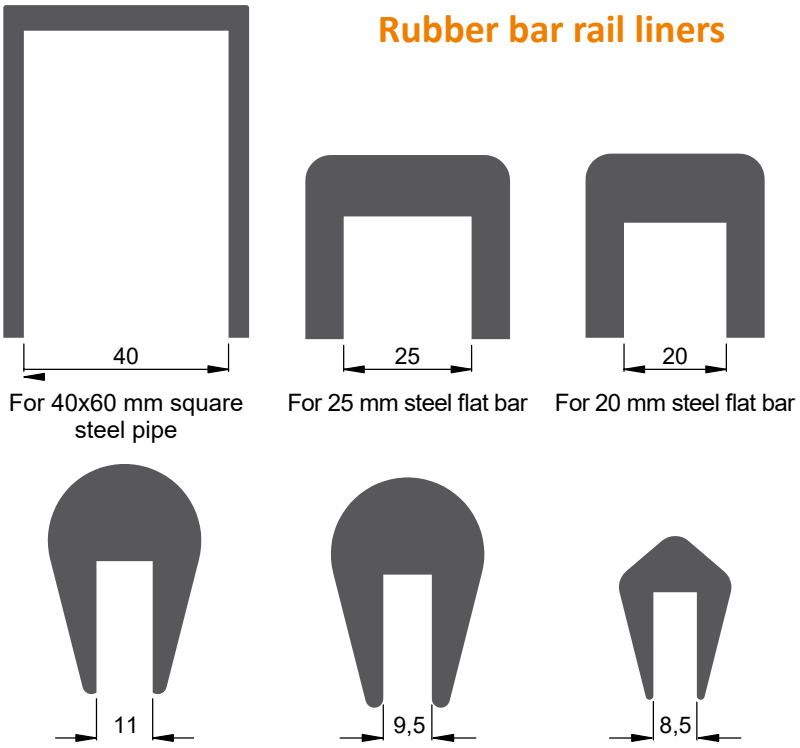
Special rubber profile





Universal central hold-down bar
Standard measurements:
50x50, 70x70, 100x100
Other dimension available on request

Rubber bar rail liners



For 40x60 mm square steel pipe

For 25 mm steel flat bar

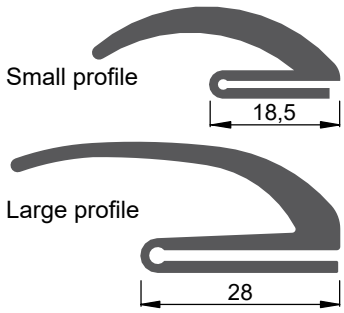
For 20 mm steel flat bar

For 10 mm steel flat bar

For 9 mm steel flat bar

For 8 mm steel flat bar

Rubber side seal profile



Rubber side plate

Manufactured under the following standards:

- Hardness (ºShore) (ISO 868)
- Density (g/cm^3) (ISO 2781 / UNE 53526)
- Breaking load (Kg/cm^2) (ISO 37 / UNE 53510)
- Rupture elongation (%) (ISO 37 / UNE 53510)
- Abrasion (%) (ISO 4649 / UNE 53527)

TN-FIX Resin

Crusher backing resin

Description:

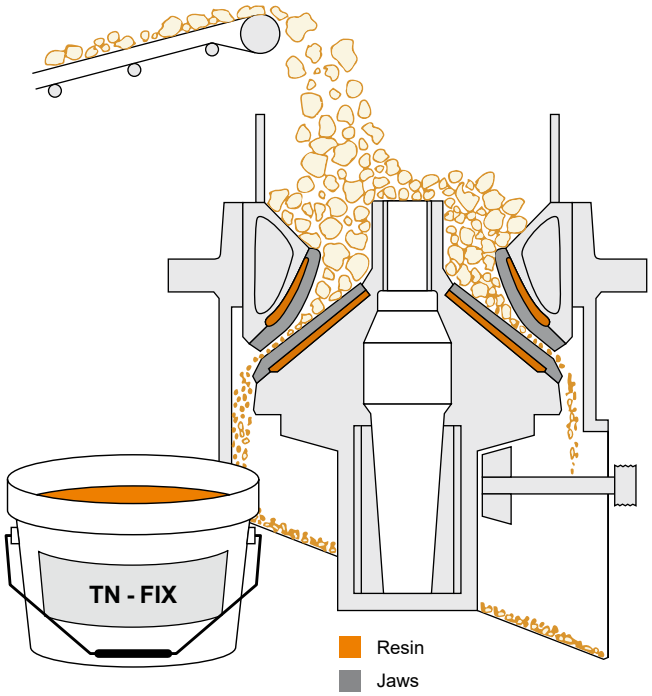
TN-Fix is a liquid epoxy resin compound, especially formulated to resist compression and impact, offering good strength support and resistance to shock vibrations.

Properties / Advantages:

- Easy, quick and clean application.
- Simple mixing without the need for tools (mixing bag).
- Application of product without dirtying any tools.
- Good fluidity that allows easy pouring.
- Dimension stability with low shrinkage.
- Hardens at room temperature.

Uses:

Crusher wear plate backing.



Packaging / Container

- **2x10 kg kit** in a recyclable bucket containing both components to be mixed before use:
  - Base A: Resin in two plastic bags.
  - Hardener B: Two doses of hardener powder.
- **10 Kg kit i**n a recyclable bucket which contains:
  - A 10 Kg kit and a hardener bag.

Storage and Distribution

Store **TN-Fix** in its original sealed package, in a closed environment, sheltered from direct sunlight and high temperature variations. Keep between 5ºC and 25ºC.
If kept in these conditions store life should be one year.

Characteristics:

Physical properties before hardening:

- Density at 20ºC: 1,5
- Appearance: yellow liquid

Epoxy cure time chart:

Temperature	5º C	15º C	20º C	30º C
Initial Hardening	90 min	20 min	15 min	5 min
Final Hardening	5h	2h 30 min	1h 30 min	45 min

Mechanical properties after hardening (at 20ºC):

- Bending strength: 37 mpa
- Tensile strength: 78 mpa
- Tensile modulus: 3820 mpa

Usage mode

- The parts (where the product will be applied) must be clean and dry.
- To facilitate the dismantling of the parts used, the support must be lubricated before the assembly of the new parts.
- For temperatures under 10ºC the parts have to be heated up to 30ºC.
- The high fluidity of **TN-Fix** allows the filling of all cracks or holes. If they are not to be filled in, they must be plugged with clay, plaster, putty etc...
- Open the bucket, pick up a resin bag and make sure that the resin is homogeneous, rolling the bag around the ground for a few minutes.
- Add a dose of hardener and mix for 2 or 3 minutes.
- Pour the mixture directly from the bag into the desired place.

Hygiene and safety:

Base A: Xn Harmful Contains styrene.

- Flammable.
- Irritating to eyes and skin.

Hardener B: C Corrosive

- Harmful in contact with skin or if swallowed.
- Causes burns

For more information, please contact our technical department.

Laboratory sieves

To carry out laboratory granulometric tests, NUBA Screening Media supplies sieves made according to the standards ISO 3310/1 with a metallic mesh and ISO 3310/2 with perforated sheet, all made from stainless steel.

Mesh Sieves (Fig. 1)
Weight: 1 kg
Dimensions: 24 x 24 x 9 cm
Diameter (mm):
100, 150, 200, 203 (8″), 250, 300x50 H, 300x80 H, 305 (12″), 400, 450, 500, 75
Apertures (mm):
0,020 - 0,025 - 0,032 - 0,036 - 0,038 - 0,040 - 0,045 - 0,050 - 0,053 - 0,056 - 0,063 - 0,071 - 0,075 - 0,080 - 0,090 - 0,100 - 0,106 - 0,112 - 0,125 - 0,140 - 0,150 - 0,160 - 0,180 - 0,200 - 0,212 - 0,224 - 0,250 - 0,280 - 0,300 - 0,315 - 0,355 - 0,400 - 0,425 - 0,450 - 0,500 - 0,560 - 0,600 - 0,630 - 0,710 - 0,800 - 0,850 - 0,900 - 1,00 - 1,12 - 1,18 - 1,25 - 1,40 - 1,60 - 1,70 - 1,80 - 2,00 - 2,24 - 2,36 - 2,5 - 2,8 - 3,15 - 3,35 - 3,55 - 4,00 - 5,00
Standard: ISO 3310/1, ASTM E 11-04

Square Sheet Sieves (Fig. 2)
Weight: 1 kg
Dimensions: 24 x 24 x 9 cm
Diameter (mm):
200, 203 (8″), 300x50 H, 300x80 H, 400, 450
Apertures (mm):
4,00 - 4,50 - 4,75 - 5,00 - 5,60 - 6,30 - 6,70 - 7,10 - 8,00 - 9,00 - 9,50 - 10,00 - 11,20 - 12,50 - 13,20 - 4,00 - 16,00 - 18,00 - 19,00 - 20,00 - 22,40 - 25,00 - 26,50 - 28,00 - 31,50 - 35,50 - 37,50 - 40,00 - 45,00 - 50,00 - 53,00 - 56,00 - 63,00 - 71,00, 75,00 - 80,00 - 90,00 - 100,00 - 106,00 - 112,00 - 125,00
Standard: ISO 3310/2, ASTM E323-80

Round Sheet Sieves (Fig. 3)
Weight: 1 kg
Dimensions: 24 x 24 x 9 cm
Diameter (mm):
200, 203 (8″), 300x50 H, 300x80 H, 400, 450
Apertures (mm):
0,50 - 1 - 1,80 - 2 - 2,50 - 3,55 - 4,00 - 4,50 - 4,75 - 5,00 - 5,60 - 6,30 - 6,70 - 7,10 - 8,00 - 9,00 - 9,50 - 10,00 - 11,20 - 12,50 - 13,20 - 14,00 - 16,00 - 18,00 - 19,00 - 20,00 - 22,40 - 25,00 - 26,50 - 28,00 - 31,50 - 35,50 - 37,50 - 40,00 - 45,00 - 50,00 - 53,00 - 56,00 - 63,00 - 71,00 - 75,00 - 80,00 - 90,00 - 100,00 - 106,00 - 112,00 - 125,00
NorStandard: ISO 3310/2, ASTM E323-80

Bottoms (Fig. 4)
Weight: 1 kg
Dimensions: 24 x 24 x 9 cm
Diameter (mm):
75, 100, 150, 200, 203 (8″), 250, 300, 305 (12″), 400, 450, 500


Fig. 1


Fig. 2


Fig. 3


Fig. 4

Architectural meshes

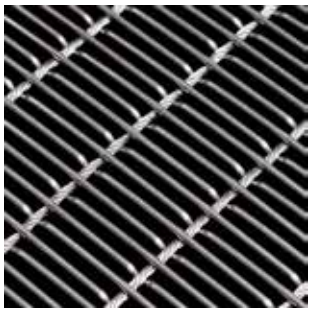
Meshes weaved with cable

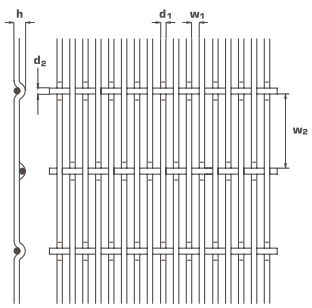
We produce a complete range of flexible solutions for architecture in the form of woven nets. They are ideal for using on the inside and outside of buildings. They can perfectly cover large façades and wall surfaces. Various interweave patterns and types enable you to play freely with space, light and composition itself.

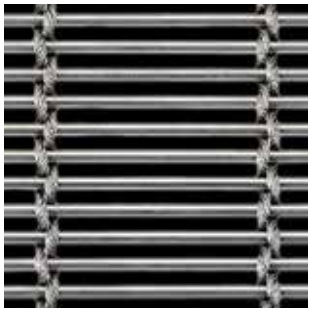
Material:
AISI 316L / AISI 304L

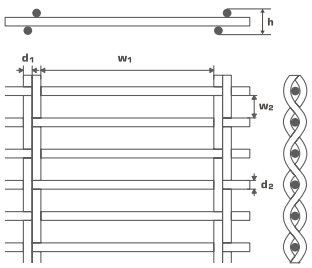
Use:
- Facades.
- Metallic false ceilings.
- Parasols.
- Guard rails and balconies.
- Fences and meshes.
- Roofs and bodies.
- Separating walls.
- Furniture.
- Ventilation gratings.
- Gratings for floors.
- Drains.

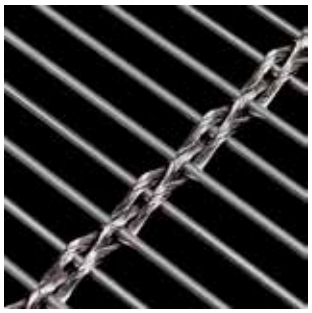
There is the possibility of implementing other mesh variants with different technical parameters and designs according to the project requirements.

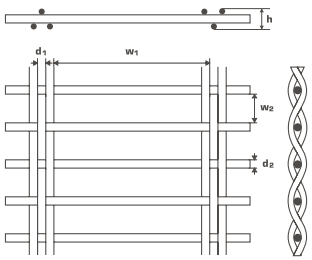


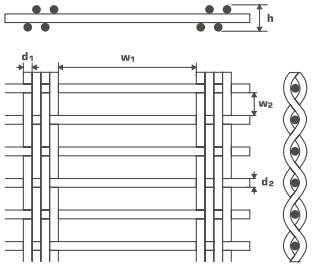


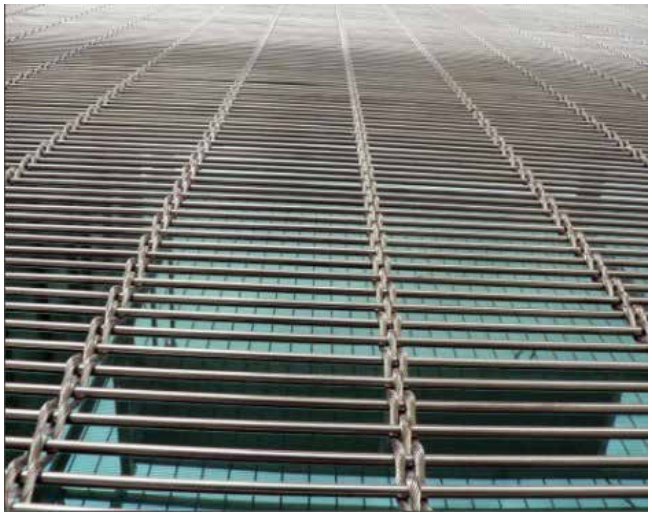






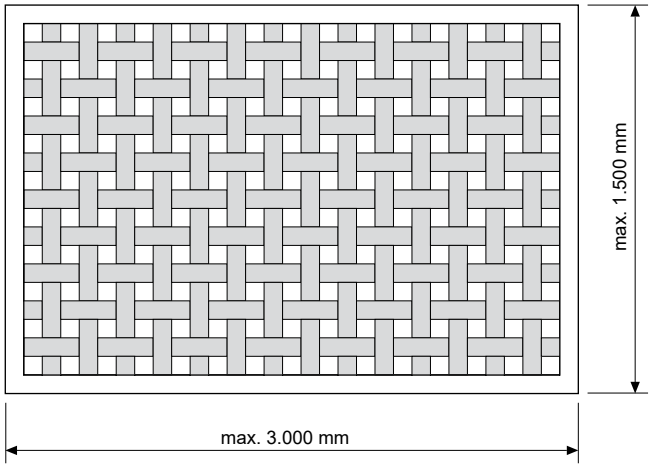


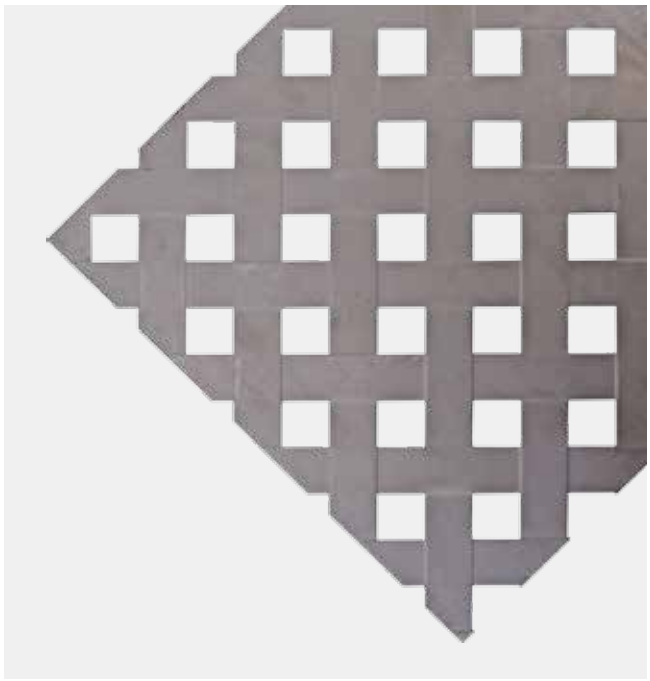




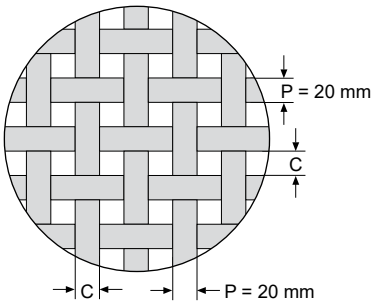
TN Decor

Perforated sheet which looks like a braided lattice for internal and external decoration, with easy application and low cost.



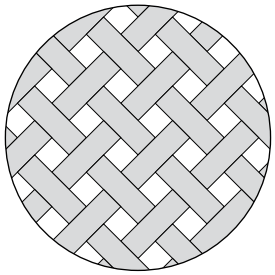


Inline square hole



C= Square side, variable (20-30-40-50 mm)
P = distance, 20-30 mm.

Staggered square hole



It can be produced in different raw materials (mild steel, galvanised steel, aluminium, stainless steel, brass…) with thickness from 0.8 to 2 mm.

Decorative steel plates

- Perforations: Depends on design.
- Thickness: From 0,5 mm to 1,5 mm *(according to perforation).*
- Dimensions: Plates up to 1.250 mm wide *(according to perforation).*

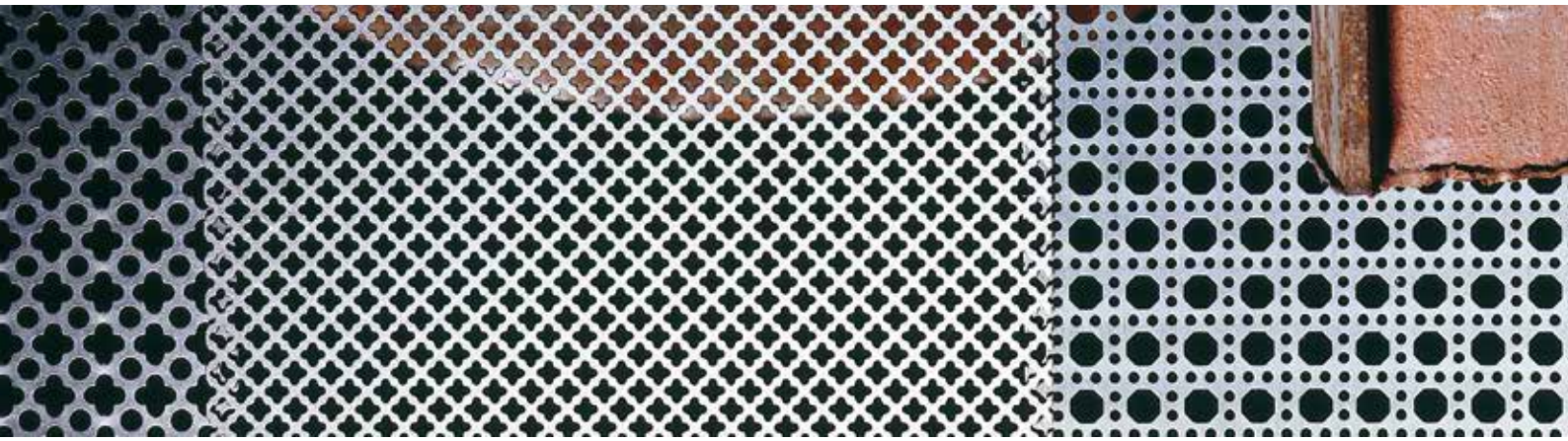
  Rolled to 1.250 mm wide *(according to perforation).*

Please contact us for other available perforations.

Perforated plates: Available standard dimensions 2.000 x 1.000 mm

Coef. Perforation	D	Thickness			
		0,5	0,8	1	1,5
41,7 %	501		•	•	•
43,22 %	504		•	•	•
47 %	505	•	•	•	•
39,57 %	508		•	•	•
40,8 %	513	•	•	•	•
42,13 %	561		•	•	•

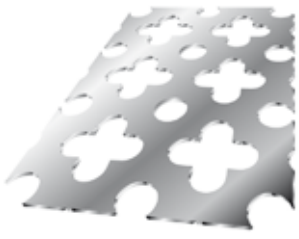
Mild steel sheets



501

504

505



508

513

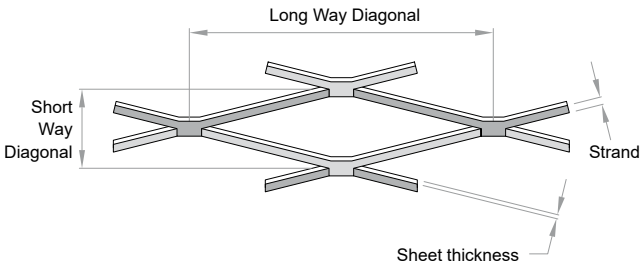
561

Expanded metal

Calculation of open area

SD / 2 x Hilo = X
100 / X = Y
Y - 100 = % Open area

Mesh measurement



We currently have diamond and hexagonal shaped holes made from expanded metal which may be laminated (flat surfaced) or standard.

To define the diamond shape, we must identify the 4 parameters which form the mesh nomenclature.

- **Short way diagonal (SD):** distance between centres of two vertical rhombuses.
- **Long way diagonal (LD):** distance between centres of two horizontal rhombuses.
- **Strand:** distance between one rhombus and the next rhombus.
- **Thickness (T):** sheet thickness.

Materials and measurements

The expanded metal may be made from different materials such as carbon steel, galvanised steel, aluminium, stainless steel, copper etc.

It can be made in rolls or sheets, the maximum width can vary depending on the thickness of the material.

The long way diagonal always has to be parallel to the material width.

FE/AL	2.500	1.500	1.250	1.000 ó lower
Thick. 0'5 mm	•	•	•	•
Thick. 1 mm	•	•	•	•
Thick. 2 mm	•	•	•	•
Thick. 3 mm	•	•	•	•
Thick. 4 mm		•	•	•
Thick. 5 mm				•

Widths

INOX	2.500	1.500	1.250	1.000 or less
Thick. 0'5 mm		•	•	•
Thick. 1 mm		•	•	•
Thick. 2 mm		•	•	•
Thick. 3 mm			•	•

Widths

Expanded metal uses the materials elasticity to conform its shape. For this reason the tolerances for the panel's dimension will be:

Length tolerance:

5x10	8x16	9x25	10x20	10x44	12x40	13x30	15x43	20x43	20x60
10mm/ml	10mm/ml	10mm/ml	10mm/ml	10mm/ml	12mm/ml	13mm/ml	15mm/ml	20mm/ml	20mm/ml

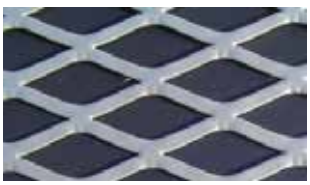
22x50	25x60	28x75	30x62	40x114	50x150	75x200	100x250	120x300
1 malla	1 malla	1 malla	1 malla	1 malla	1 malla	1 malla	1 malla	1 malla

Width tolerance:

- Nominal width tolerance will be: - 0 + 15 for iron and galvanised
- Nominal width tolerance will be: - 0 + 5 for aluminium and stainless steel.
- The final width tolerance will be: - 0 + 2 mm.

Flattened expanded metal

Expanded metal is, because of its manufacturing process, a non-flat surface. As the metal sheet is expanded it deforms and twists. The mesh can be flattened using a cold roll reducing mill; this will make strands and bonds to flatten, turning them into a smooth and flat surface. This process will also elongate the Long Way Diagonal (DL) and reduce the thickness of the mesh.


Flattened expanded metal

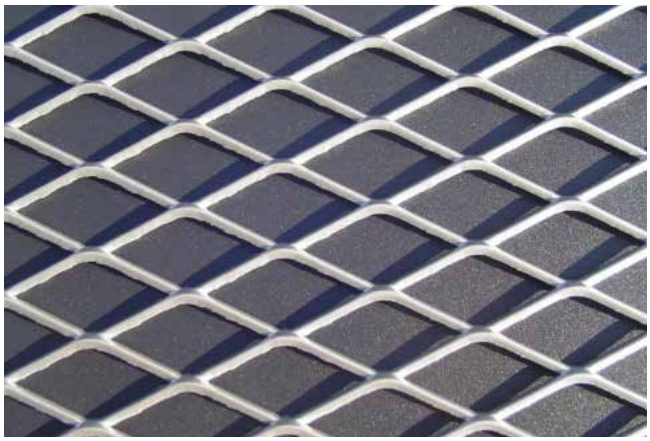

Standard expanded metal

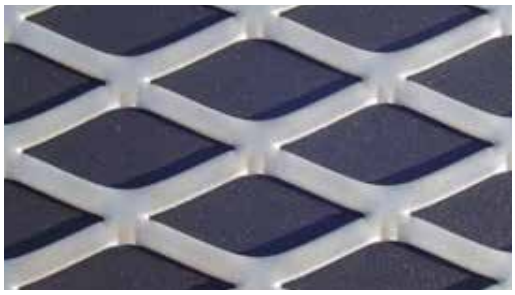
Dimension specification for flattened expanded metal.

Width:
Effective minimum = 300 mm
Effective maximum = 1.500 mm

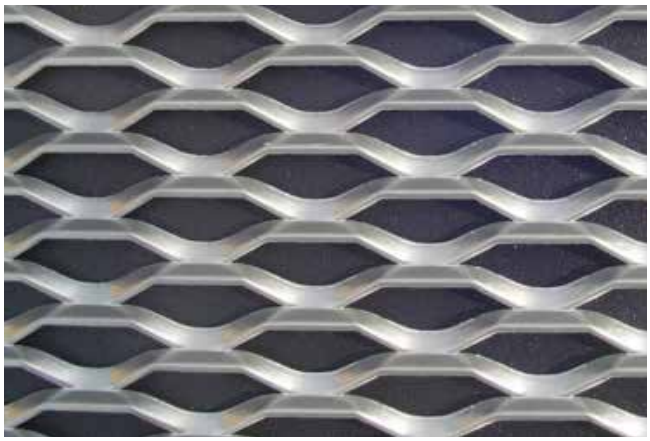
Thickness:
Iron: 3 mm
Aluminium: 4 mm
Stainless steel: 2 mm

Diamond Mesh

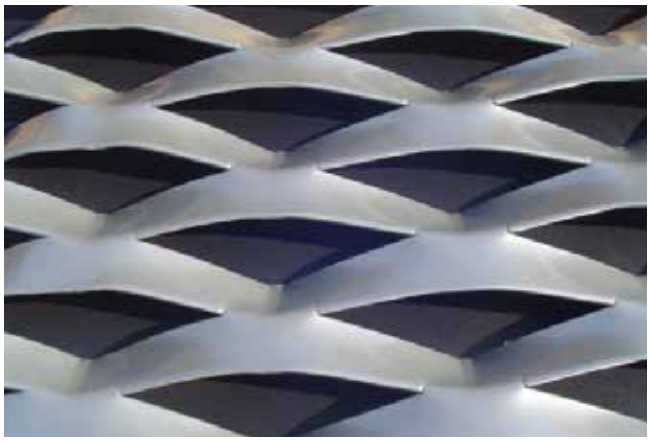


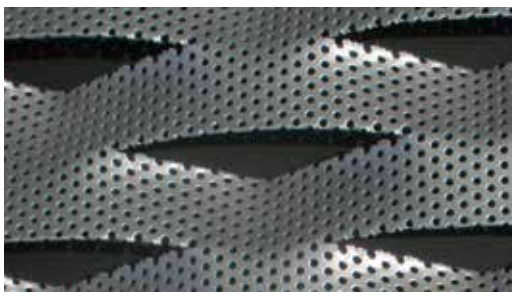


Hexagonal Mesh



Architectural Mesh





Diamond Mesh

SD	LD	S	T
Mesh 5x10			
5	10	1	0,5
5	10	1	0,8
5	10	1	1
5	10	1,5	0,5
5	10	1,5	0,8
5	10	1,5	1
5	10	1,5	1,5
5	10	2	0,5
5	10	2	0,8
5	10	2	1
5	10	2	1,5
Mesh 8x16			
8	16	1	0,5
8	16	1	0,8
8	16	1	1
8	16	1,5	0,5
8	16	1,5	0,8
8	16	1,5	x1
8	16	1,5	1,5
8	16	2	0,5
8	16	2	0,8
8	16	2	1
8	16	2	1,5
8	16	3	0,5
8	16	3	0,8
8	16	3	1
8	16	3	1,5
Mesh 10x20			
10	20	1	0,5
10	20	1	0,8
10	20	1	1
10	20	1,5	0,5
10	20	1,5	0,8
10	20	1,5	1
10	20	1,5	1,5
10	20	2	0,5
10	20	2	0,8
10	20	2	1
10	20	2	1,5
10	20	3	0,5
10	20	3	0,8
10	20	3	1
10	20	3	1,5
10	20	3	2
Mesh 12x40			
12	40	1,5	1
12	40	1,5	1,5
12	40	2	1
12	40	2	1,5
12	40	3	1
12	40	3	1,5
12	40	3	2
12	40	4	1
12	40	4	1,5
12	40	4	2
12	40	5	1
12	40	5	1'5
12	40	5	2

SD	LD	S	T
Mesh 13x30			
13	30	1	0,8
13	30	1	1
13	30	1,5	0,8
13	30	1,5	1
13	30	1,5	1,5
13	30	2	1
13	30	2	1,5
13	30	3	1
13	30	3	1,5
13	30	3	2
13	30	4	1
13	30	4	1,5
13	30	4	2
13	30	5	1
13	30	5	1,5
13	30	5	2
Mesh 15x43			
15	43	1,5	1
15	43	1,5	1,5
15	43	2	1
15	43	2	1,5
15	43	2	2
15	43	3	1,5
15	43	3	2
15	43	4	1,5
15	43	4	2
15	43	4	3
15	43	5	1,5
15	43	5	2
15	43	5	3
15	43	6	1,5
15	43	6	2
15	43	6	3
Mesh 20x60			
20	60	1,5	1
20	60	1,5	1,5
20	60	2	1
20	60	2	1,5
20	60	2	2
20	60	3	1,5
20	60	3	2
20	60	3	3
20	60	4	1,5
20	60	4	2
20	60	4	3
20	60	5	1,5
20	60	5	2
20	60	5	3
20	60	6	1,5
20	60	6	2
20	60	6	3
Mesh 22x50			
22	50	1,5	1
22	50	1,5	1,5
22	50	2	1
22	50	2	1,5
22	50	2	2
22	50	3	1,5

SD	LD	S	T
22	50	3	2
22	50	3	3
22	50	4	1,5
22	50	4	2
22	50	4	3
22	50	5	1,5
22	50	5	2
22	50	5	3
22	50	6	1,5
22	50	6	2
22	50	6	3
Mesh 25x60			
25	60	1,5	1,5
25	60	2	1,5
25	60	2	2
25	60	3	1,5
25	60	3	2
25	60	3	3
25	60	4	1,5
25	60	4	2
25	60	4	3
25	60	4	4
25	60	5	1,5
25	60	5	2
25	60	5	3
25	60	5	4
25	60	6	1,5
25	60	6	2
25	60	6	3
25	60	6	4
25	60	8	1,5
25	60	8	2
25	60	8	3
25	60	8	4
25	60	10	1,5
25	60	10	2
25	60	10	3
25	60	10	4
Mesh 28x75			
28	75	1,5	1,5
28	75	2	1,5
28	75	2	2
28	75	3	1,5
28	75	3	2
28	75	3	3
28	75	4	1,5
28	75	4	2
28	75	4	3
28	75	4	4
28	75	5	1,5
28	75	5	2
28	75	5	3
28	75	5	4
28	75	6	1,5
28	75	6	2
28	75	6	3
28	75	6	4
28	75	8	1,5
28	75	8	2

SD	LD	S	T
28	75	8	3
28	75	8	4
28	75	10	1,5
28	75	10	2
28	75	10	3
28	75	10	4
Mesh 30x60			
30	60	1,5	1,5
30	60	2	1,5
30	60	2	2
30	60	3	1,5
30	60	3	2
30	60	3	3
30	60	4	1,5
30	60	4	2
30	60	4	3
30	60	5	1,5
30	60	5	2
30	60	5	3
30	60	6	1,5
30	60	6	2
30	60	6	3
30	60	8	1,5
30	60	8	2
30	60	8	3
30	60	10	1,5
30	6	10	2
30	60	10	3
Mesh 40x114			
40	114	1,5	1,5
40	114	2	1,5
40	114	2	2
40	114	3	1,5
40	114	3	2
40	114	3	3
40	114	4	1,5
40	114	4	2
40	114	4	3
40	114	5	1,5
40	114	5	2
40	114	5	3
40	114	6	1,5
40	114	6	2
40	114	6	3
40	114	8	1,5
40	114	8	2
40	114	8	3
40	114	10	1,5
40	114	10	2
40	114	10	3

(SD) Short way diagonal
(LD) Long way diagonal
(S) Strand
(T) Thickness

Hexagonal Mesh

SD	LD	S	T
Mesh 9x25			
9	25	1	1
9	25	1,5	1
9	25	2	1
9	25	2,5	1
9	25	3	1
9	25	1,5	1,5
9	25	2	1,5
9	25	2,5	1,5
9	25	3	1,5
Mesh 11x44			
11	44	2,5	1
11	44	3	1
11	44	2,5	1,5
11	44	3	1,5
11	44	2,5	2
11	44	3	2

(SD) Short way diagonal
(LD) Long way diagonal
(S) Strand
(T) Thickness

Architectural Mesh

SD	LD	S	T
Mesh 40x40			
40	40	20	1,5
40	40	20	2
Mesh 24x43			
24	43	10	1,5
24	43	10	2
Mesh 30x60			
30	60	10	1,5
30	60	10	2
Mesh 33x75			
33	75	10	1,5
33	75	10	2
Mesh 46x75			
46	75	18	1,5
46	75	18	2
46	75	20	1,5
46	75	20	2
Mesh 53x75			
53	75	24	1,5
53	75	24	2
Mesh 48x114			
48	114	13	1,5
48	114	13	2
48	114	15	1,5
48	114	15	2
48	114	18	1,5
48	114	18	2
Mesh 50x114			
50	114	20	1,5
50	114	20	2
53	114	24	1,5
53	114	24	2

New Mesh
Mesh 50x150
TN 15015 Thick. 1,5
TN 15015 Thick. 2
TN 15020 Thick. 1,5
TN 15020 Thick. 2
TN 15025 Thick. 1,5
TN 15025 Thick. 2
Mesh 75x200
TN 20015 Thick. 1,5
TN 20015 Thick. 2
TN 20020 Thick. 1,5
TN 20020 Thick. 2
TN 20025 Thick. 1,5
TN 20025x2 Thick. 2
Mesh 100x250
TN 25015 Thick. 1,5
TN 25015 Thick. 2
TN 25020 Thick. 1,5
TN 25020 Thick. 2
TN 25025 Thick. 1,5
TN 25025 Thick. 2
Mesh 120x300
TN 30015 Thick. 1,5
TN 30015 Thick. 2
TN 30020 Thick. 1,5
TN 30020 Thick. 2
TN 30025 Thick. 1,5
TN 30025 Thick. 2
TN 30030 Thick. 1,5
TN 30030 Thick. 2
TN 30035 Thick. 1,5
TN 30035 Thick. 2

TN-Sold Gratings

TN-Sold Gutters

Mesh	Bearing bar	Cross bar	Dimensions	Finishes
30 X 30	30 X 2	Ø 5 mm	200 X 1000	Galvanized
30 X 30	30 X 2	Ø 5 mm	250 X 1000	"
30 X 30	30 X 2	Ø 5 mm	300 X 1000	"
30 X 30	30 X 3	Ø 5 mm	250 X 1000	"
30 X 30	30 X 3	Ø 5 mm	300 X 1000	"

TN-Sold Gratings

Mesh	Bearing bar	Cross bar	Dimensions	Finishes
30 X 30	30 X 2	Ø 5 mm	400 X 1000	Galvanized
30 X 30	30 X 2	Ø 5 mm	500 X 1000	"
30 X 30	30 X 2	Ø 5 mm	600 X 1000	"
30 X 30	30 X 2	Ø 5 mm	700 X 1000	"
30 X 30	30 X 2	Ø 5 mm	800 X 1000	"
30 X 30	30 X 2	Ø 5 mm	900 X 1000	"
30 X 30	30 X 2	Ø 5 mm	1000 X 1000	"
30 X 30	30 X 2	Ø 5 mm	1200 X 1000	"
30 X 30	30 X 2	Ø 5 mm	1500 X 1000	"
30 X 30	30 X 2	Ø 5 mm	2000 X 1000	"
30 X 30	30 X 2	Ø 5 mm	3000 X 1000	"
30 X 30	30 X 3	Ø 5 mm	400 X 1000	"
30 X 30	30 X 3	Ø 5 mm	1000 X 1000	"
30 X 30	30 X 3	Ø 5 mm	1200 X 1000	"
30 X 30	30 X 3	Ø 5 mm	1500 X 1000	"
30 X 30	30 X 3	Ø 5 mm	2000 X 1000	"
30 X 30	30 X 3	Ø 5 mm	3000 X 1000	"

TN-Sold Steps

Mesh	Bearing bar	Cross bar	Dimensions	Finishes
30 X 30	30 X 2	Ø 5 mm	600 X 240	Galvanized
30 X 30	30 X 2	Ø 5 mm	700 X 240	"
30 X 30	30 X 2	Ø 5 mm	700 X 270	"
30 X 30	30 X 2	Ø 5 mm	800 X 240	"
30 X 30	30 X 2	Ø 5 mm	800 x 270	"
30 X 30	30 X 3	Ø 5 mm	900 x 270	"
30 X 30	30 X 3	Ø 5 mm	1000 x 270	"
30 X 30	30 X 3	Ø 5 mm	1000 x 300	"
30 X 30	30 X 3	Ø 5 mm	1200 x 300	"

Evenly distributed loads in Kg/m² on a 30x30 mm aperture grating

Distance between supports	Dimensions of the supporting rolls in mm									
	20/2	20/3	25/2	25/3	30/2	30/3	35/2	35/3	40/2	40/3
500 mm	1920	2880	3055	4595	4270	6390	5785	8690	7655	11485
600 mm	1315	1990	2095	3130	2950	4420	4080	6110	5305	7955
700 mm	970	1465	1515	2275	2190	3275	2950	4420	3865	5785
800 mm	*760	1135	1160	1745	1670	2500	2300	3435	3055	4595
900 mm		900	910	1390	1315	1970	1820	2755	2325	3485
1000 mm		*700	*740	1110	1060	1590	1465	2215	1920	2880
1100 mm		590	605	910	885	1340	1215	1840	1575	2365
1200 mm				*780	*740	1110	1010	1515	1315	1990
1300 mm				*650	*630	960	850	1265	1110	1680
1400 mm					555	835	*745	1110	975	1465
1500 mm						*600	*655	985	*850	1265
1600 mm						*445	*525	*710	*670	1050
1700 mm						340	405	*545	*545	*820
1800 mm								*440	*455	*655
1900 mm								350	360	*524
2000 mm								295	300	*440
Kg/m²	16.14	21.50	18.99	25.68	21.84	29.87	24.69	34.06	27.54	38.25

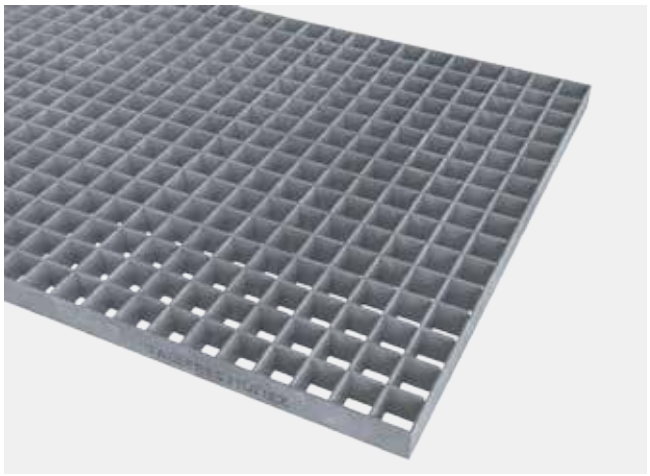
**Recommended for staff use.*

Evenly distributed load in Kgs/m²

F ≦0,4 cm. F ≦1,0 cm. F ≦1/200 aperture F = excessive

TN Gratings

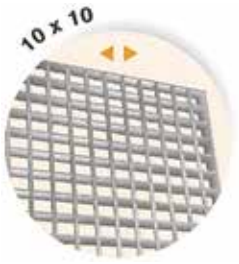
Our gratings are supplied: hot-galvanised, painted or black. The direction of the arrow (◄ ►) indicates the position of the bearing flat-bar.

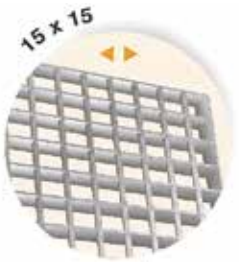


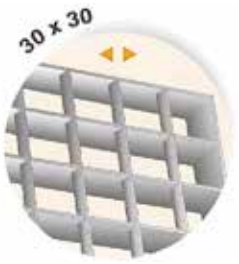
Evenly distributed loads in Kg/m² on a 30x30 mm aperture grating

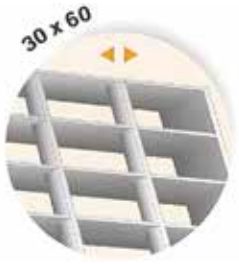
Distance between supports	Dimensions of the supporting rolls in mm											
	20/2	20/2	30/2	35/2	40/2	50/2	20/3	25/3	30/3	35/3	40/3	50/3
500 mm	1610					1930	3050	4350				
600 mm	1105	1800				1340	2115	3850				
700 mm	750	1310	1800	2635	3260	4400	980	1950	2400	3400	4255	6250
800 mm	600	1000	1370	1950	2450	3910	765	1500	2050	2910	3630	4745
900 mm	455	805	1100	1565	1955	3000	600	1200	1660	2425	3040	3725
1000 mm	370	650	880	1360	1650	2510	485	975	1320	2045	2465	3000
1100 mm	310	550	725	1055	1300	2105	395	820	1080	1575	1960	2475
1200 mm		455	600	870	1110	1810	330	675	900	1310	1650	2080
1300 mm		375	525	750	920	1550	280	560	785	1120	1385	1775
1400 mm		320	440	645	810	1325		480	670	965	1210	1525
1500 mm			375	550	705	1075		415	560	830	1050	1365
1600 mm			330	470	650	885		360	480	715	975	1160
1700 mm				425	545	705		310	425	635	815	1000
1800 mm				370	475	550			370	550	705	920
1900 mm				330	430	500			330	495	640	825
2000 mm				300	375	465			300	455	565	755
Kg/m²	21	24,2	27,5	31	34	41	27	31,2	35,5	40	44,2	53

The first measurement determines the bearing flat-bar. Other measurements available on request.









Available standard TN Gratings

Mesh	Bearing bar	Cross bar	Dimensions	Finishes
30 X 30	25 X 2	10 x 2	500 X 1000	Galvanized
30 X 30	25 X 2	10 x 2	1000 X 1000	"
30 X 30	25 X 2	10 x 2	1000 X 2000	"
30 X 30	30 X 2	10 x 2	1000 X 2000	"
30 X 30	30 X 2	10 x 2	1000 x 3000	"
30 X 30	30 X 2	30 x 2	2000 x 1000	"
30 X 30	30 X 3	30 x 3	2000 x 1000	"

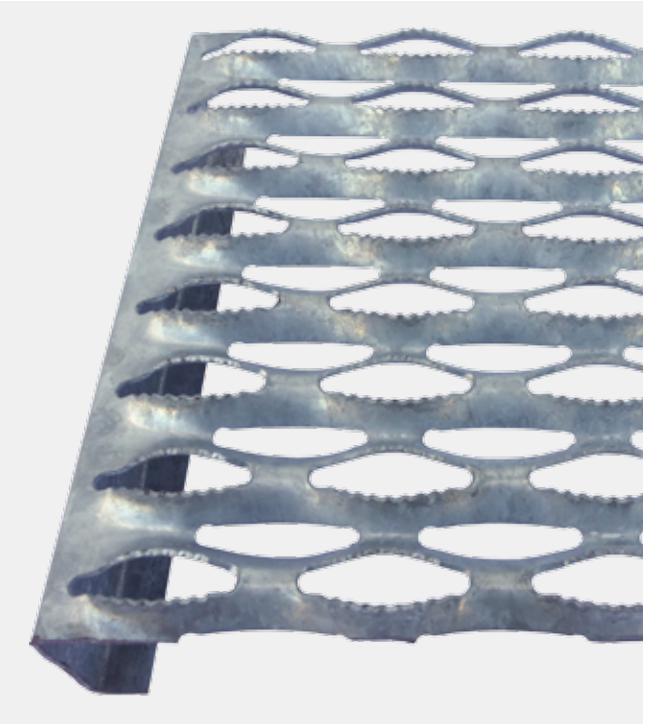
Metallic Floors

Stepbloc

To avoid the risk of slipping, the industrial Stepbloc floor provides a jagged surface which ensures the maximum adherence of footwear. Its design allows the evacuation of ice, snow, clay and rain, making it ideal under the worst atmospheric conditions giving it excellent antiskid properties.

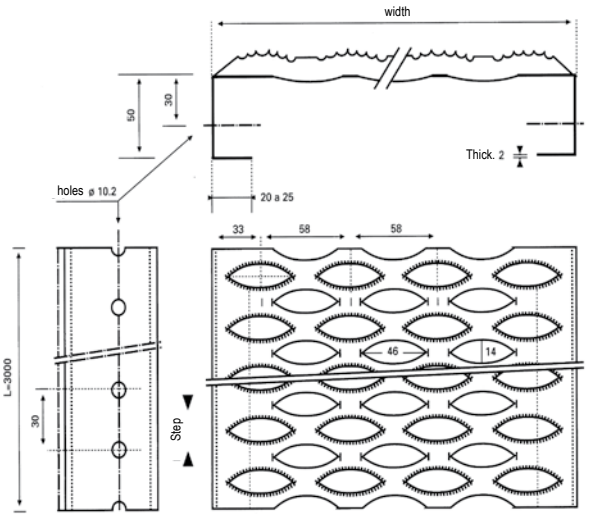
It has a 37% pitch coefficient in its apertures, which allows light to go through, but the apertures are small enough to avoid a 15mm diameter ball to go through, making it very safe in avoiding hazardous objects falling. These small apertures also prevent vertigo as you can't see directly through the Stepbloc.

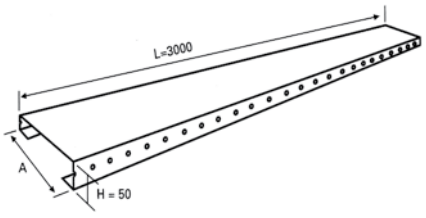
The shape of the apertures makes maintenance very easy with just air or water.

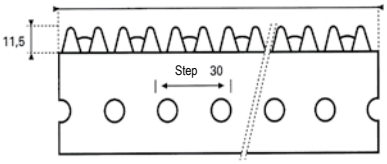


Width mm	Height mm	Load*	Support Points					
			500	750	1000	1250	1500	1750
240	50	CC	462	289	205	161	131	111
		CR	6186	2742	1540	987	683	500
360	50	CC	462	289	205	161	131	111
		CR	4171	1848	1038	665	456	339
480	50	CC	462	289	205	161	131	111
		CR	3126	1358	778	499	342	254

** CL: Concentrated load in Kg*
** DL: Evenly distributed load in Kg/m^2.*
Stock available in lengths of 3000 mm.
Possibility of manufacture from aluminium and stainless steel.
Other measurements available on request.





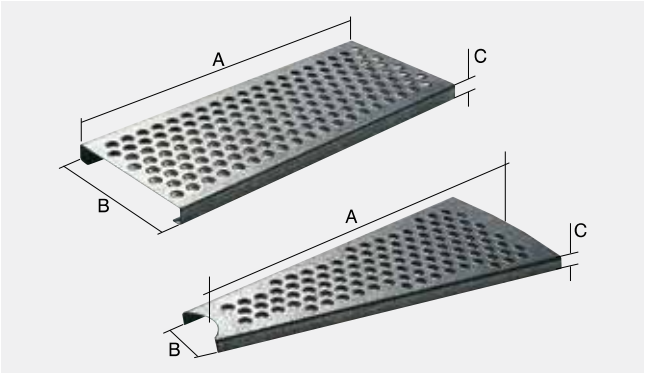


Metallic Floors

TN-Light, TN-Block and TN-Norm

Designed to withstand distributed loads of around 500 Kg/m^2, it is recommended to use our metallic floors to replace embossed plates. It is easy and economical to install and may be assembled by means of screws or by welding them to the beams. Panels of 1 to 2 m^2 can also be formed by means of a handrail welded to the lower part, obtaining a dismountable floor without any securing element.

TN-Light



Dimensions A X B X C	Thickness	Floor weight		Load evenly distributed with 1m aperture in kg per m^2	Concentrated load in middle of an isolated element with 1m aperture in Kg.
		By element 1m in length Kg/m.l.	By m^2 Kg/m^2		
2000 X 250 X 30	2	3	12	800	150
1000 X 250 X 30					
800 X 250 X 30					
700 X 250 X 30					
600 X 250 X 30					

Floor

Dimensions			Thickness
A	B	C	
600 X 2	110	25	2
700 X 2	110	25	2
800 X 2	110	25	2

Spiral

TN-Block

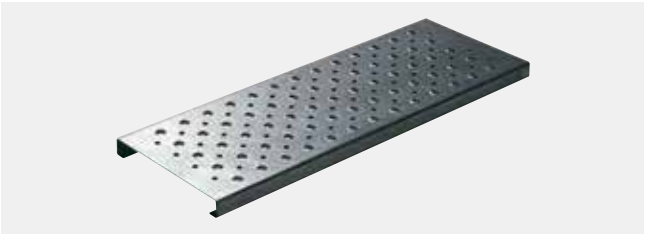
Dimensions A X B X C	Thickness	Floor weight		Load evenly distributed with 1m aperture in kg per m^2	Concentrated load in middle of an isolated element with 1m aperture in Kg.
		By element 1m in length Kg/m.l.	By m^2 Kg/m^2		
2000 X 250 X 30	2	5,3	23	800	150
1000 X 250 X 30					
800 X 250 X 30					
700 X 250 X 30					
600 X 250 X 30					

Floor

Dimensions			Thickness
A	B	C	
600 X 2	110	25	2
700 X 2	110	25	2
800 X 2	110	25	2

Spiral

TN-Norm



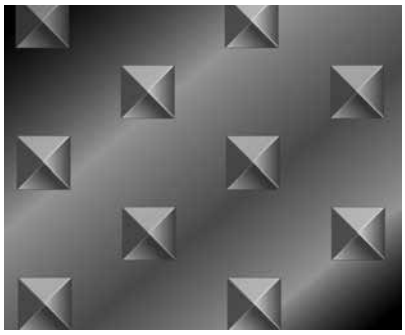
Dimensions A X B X C	Thickness	Floor weight		Load evenly distributed with 1m aperture in kg per m^2	Concentrated load in middle of an isolated element with 1m aperture in Kg.
		By element 1m in length Kg/m.l.	By m^2 Kg/m^2		
2000 X 250 X 30	2	4	18	800	150
1000 X 250 X 30					
800 X 250 X 30					
700 X 250 X 30					
600 X 250 X 30					

Floor

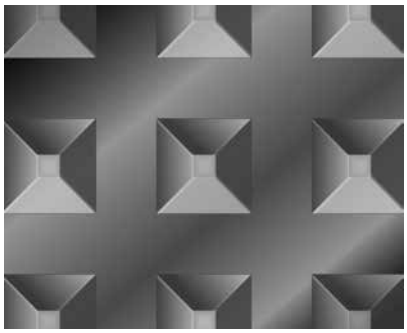
Embossed steel plates

- Dimensions: Made of 2,000 x 1,000 mm sheet for immediate delivery.
- Material: It is supplied in iron, aluminium, stainless steel etc.
- Uses: Metallic constructions, Shipbuilding Industry, Bodywork.

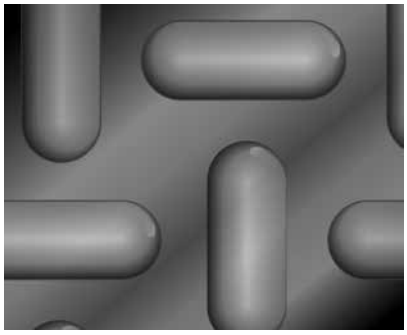
Model A
Thickness of 1'5 and 2 mm.



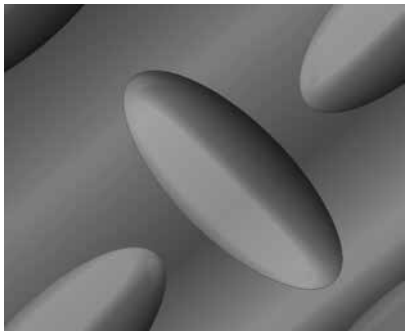
Model B
Thickness of 1, 1'5, 2 and 3 mm.



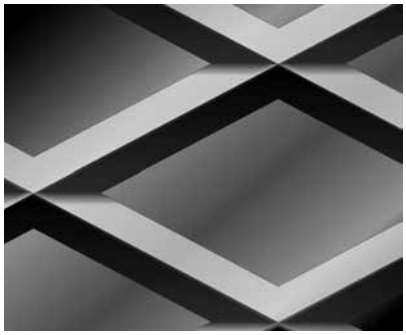
Model C
Thickness of 1, 1'5, 2, 3 and 4 mm.



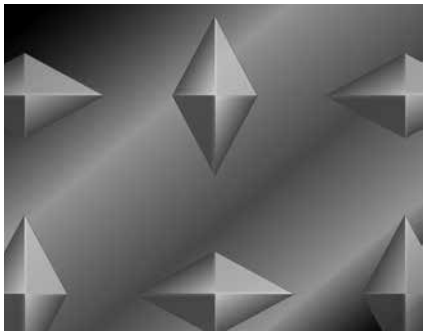
Model D
Thickness of 1, 1'5, 2, 3 and 4 mm.



Model E
Thickness of 2, 3 and 4 mm.



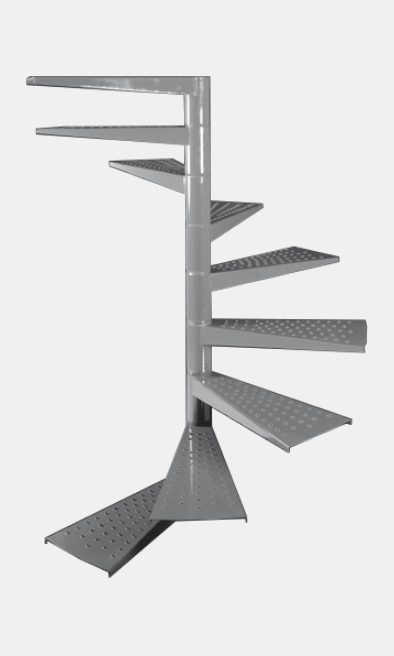
Model F
Thickness of 2 mm.



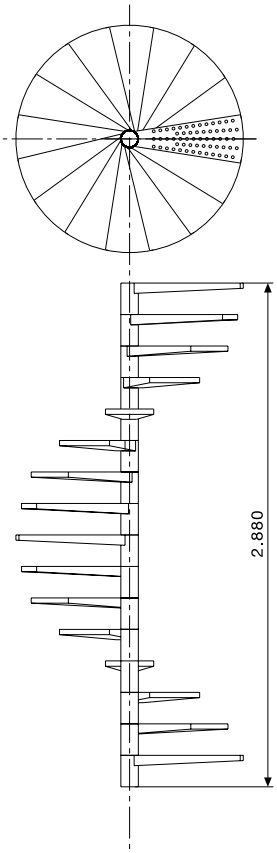
TN Kit

TN-Kit is an easy design solution for the quick assembly of all kinds of stairs. TN-Kit combines ease and economy.

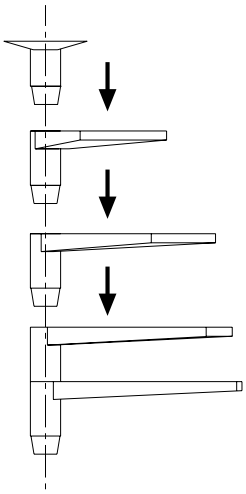
Spiral (perforated or embossed steel plates)



16 steps = full revolution (360º)
16 steps = 2,880 mm.

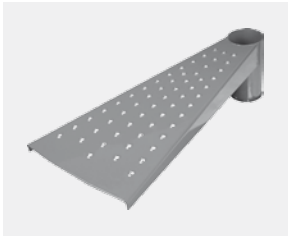


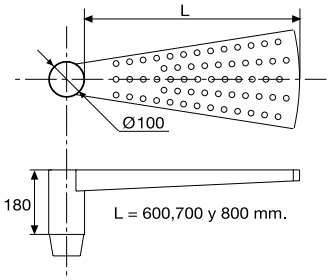
Spiral R	600 x 3	700 x 3	800 x 3
Spiral P	600 x 3	700 x 3	800 x 3
Step R	600 x 2	700 x 2	800 x 2
Step P	600 x 2	700 x 2	800 x 2



Perforated Spiral
The lightest antislip spiral staircase for exteriors.

Embossed Spiral
The spiral with the greatest robustness.





*** These steps comply with Spanish safety standards**

Concertina

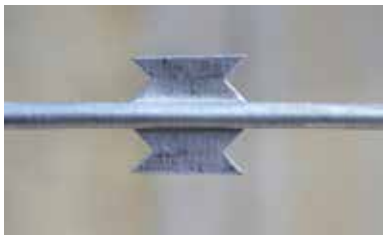
Concertinas are a kind of barbed wire made of stainless or galvanised steel in large reels which have the ability to expand like an accordion characterised by being a passive safety element.

Concertina wire is mainly used to form high-security fences as a deterrent to prevent the intrusion of unauthorised people to a restricted area, thus being particularly useful in industrial, government and military locations.

Its spiral shape makes installation a simple task, easily mountable on walls, meshes and other vulnerable areas.

The concertina design, endowed with highly resistant blades, has great capacity for penetration and inviolability whilst simultaneously producing a deterrent effect on any possible intruders

Concertina 10
Blade: 10mm.
Diameter: 450mm-1500mm.
Finish: stainless or galvanised steel with highly resistant wire 1400-1600 Mpa.



Concertina 15
Blade: 15mm.
Diameter: 450mm-1500mm.
Finish: stainless or galvanised steel with highly resistant wire 1400-1600 Mpa.

Concertina 22
Blade: 22mm.
Diameter: 450mm-1500mm.
Finish: stainless or galvanised steel with highly resistant wire 1400-1600 Mpa.

Concertina 25
Blade: 25mm.
Diameter: 450mm-1500mm.
Finish: stainless or galvanised steel with highly resistant wire 1400-1600 Mpa.

Concertina 28
Blade: 28mm.
Diameter: 450mm-1500mm.
Finish: stainless or galvanised steel with highly resistant wire 1400-1600 Mpa.

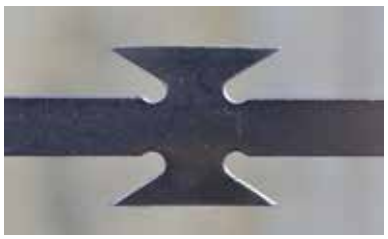
Concertina 65
Blade: 65mm.
Diameter: 450mm-1500mm.
Finish: stainless or galvanised steel with highly resistant wire 1400-1600 Mpa.

Concertina 60
Blade: 60mm.
Diameter: 450mm-1500mm.
Finish: stainless or galvanised steel with highly resistant wire 1400-1600 Mpa.

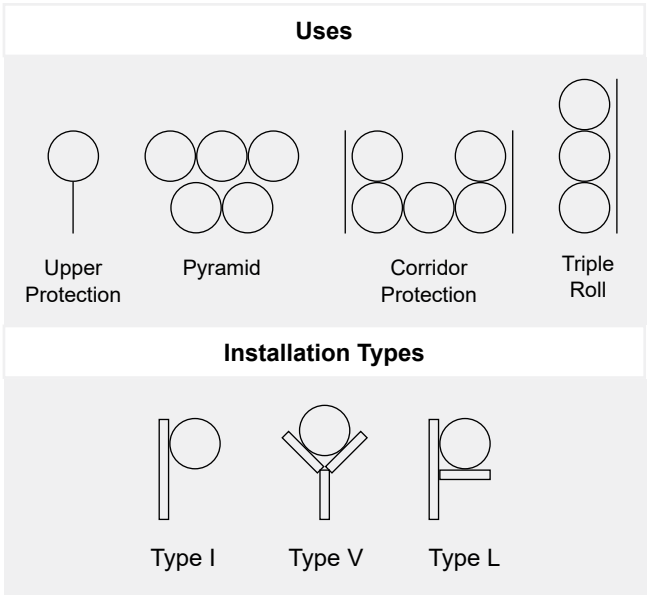
Concertina 65 H
Blade: 65mm.
Diameter: 450mm-1500mm.
Finish: stainless or galvanised steel with highly resistant wire 1400-1600 Mpa.

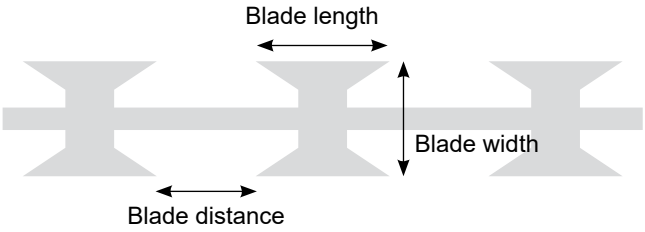
Concertina 50
Blade: 50mm.
Diameter: 450mm-1500mm.
Finish: stainless or galvanised steel with highly resistant wire 1400-1600 Mpa.

Concertina CT 10
Blade: 10mm.
Diameter: 200mm.
Finish: stainless or galvanised steel with highly resistant wire 1400-1600 Mpa.



Concertina CT 22
Blade: 22mm.
Diameter: 200mm.
Finish: stainless or galvanised steel with highly resistant wire 1400-1600 Mpa.





Barbed Wire

Barbed Wire is suitable for closing off and protecting farms and it is the ideal complement for strengthening the safety of industrial, military areas etc.

On the other hand, barbed wire is an extra complement to increase the safety of enclosures protected by concertinas.

Our barbed wire is made from the best raw materials such as - in this case - steel. It is characterised by its tensile strength of 400kg/m^2.

Technical characteristics

Type	Ø Wire	Ø Barbs	Distance in barbs	Rolls
D 173	1,70 mm	1,40 mm	8 cm	100
D 174	1,70 mm	1,40 mm	10 cm	100
D 176	1,70 mm	1,40 mm	15 cm	250
D 166	1,60 mm	1,40 mm	15 cm	250

Metallic Conveyor Belts

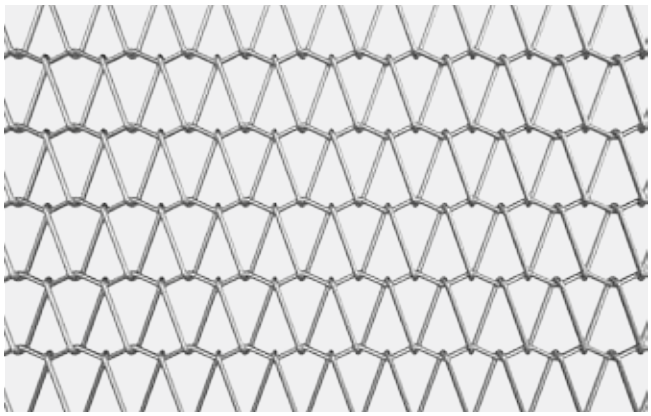
They have a wide range of uses in many industries as varied as food, agroindustry, canning, metallurgical, fishing, wood rolling mills etc., providing a solution to the continuous transport requirements in its production procedures.

Stainless Steel Models

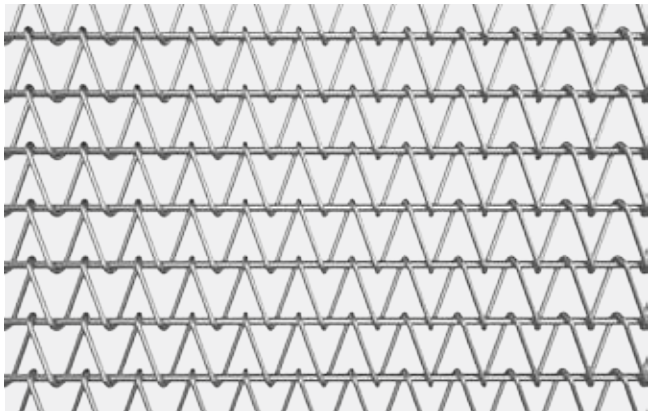
Model Belt	Pitch Spiral (Sp) mm	Pin distance (Hp) mm	Spiral Diameter (Sd) mm	Pin Diameter (Hd) mm
2,5 x 10	2,5	10	1	1,5
2,5 x 14	2,5	14	1,5	1,5
5 x 6	5	6	1	1 - 1,5
5 x 8 Chevron T	5	8	1,0	1
5 x 8	5	8	1 - 1,5	1,5
5 x 8 Chevron D	5	8	1	1,5
5 x 10 Chevron D	5	10	1	1,5
5 x 12,5	5	12,5	1,5	1,5
5 x 12	5	12	2	2
5 x 14	5	14	1,0 - 1,5	1,5
5 x 14	5	14	2	3,5
5 x 22	5	22	1,5	3
6 x 8	6	8	1 - 1,5	1,5
7,5 x 10	7,5	10	1 - 1,5	1,5 - 2
7,5 x 13	7,5	13	1,5	1,5 - 2
8 x 30	8	30	2,5	4
9 x 11	9	11	1 - 1,5	1 - 1,5 - 2
9 x 12	9	12	1 - 1,5 - 2	1,5 - 2 - 2,5
9 x 30	9	30	2	2,5
10 x 13	10	13	2	2 - 2,5 - 3
13 x 16	13	16	1,5 - 2 - 2,5	2 - 2,5 - 3,5
10 x 21	10	21	1,5 - 2 - 2,5	1,5 - 2 - 2,5 - 3
12 x 21	12	21	1,5 - 2 - 2,5	2 - 2,5 - 3
13 x 24	13	24	2,5 - 3	2,5 - 3
15 x 18	15	18	2	2,5
15 x 20	15	20	1,5 - 2 - 2,5 - 3	1,5 - 2 - 2,5 - 3 - 3,5
16 x 24	16	24	2,5	2,5
17 x 18	17	18	1,5 - 2,5	2,5 - 3
17 x 25	17	25	2,5	3
26 x 36	26	36	2	3
26 x 40	26	40	3	3
RGM/BI 1/4"	10	V=6	1,0	-
RGM/BI 1/4"	10	V=6	1,5	-
RGM/BI 3/8"	13	V=8	1,5	-
RGM/BI 3/4"	13	V=8	2	-

Galvanised Steel Models

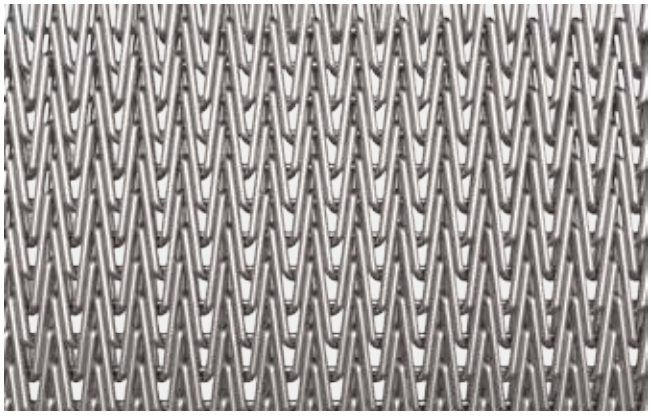
Model Belt	Pitch Spiral (Sp) mm	Pin distance (Hp) mm	Spiral Diameter (Sd) mm	Pin Diameter (Hd) mm
2,5 x 10	2,5	10	18	18
5 x 8	5	8	18	18 - 16
5 x 12	5	12	16	16
5 x 14	5	14	14	14 - 10
5,5 x 22	5	22	14	12
1/4" x 1/2"	6,5	12,5	14	14
7,5 x 11	7,5	11	18 - 16	16 - 14
7,5 x 13	7,5	13	16	16 - 14
9 x 12	9	12	18 - 16 - 14	16 - 14 - 12
10 x 13	10	13	14	14 - 12
13 x 16	13	16	16 - 14 - 12	14 - 12 - 10
10 x 21	10	21	16 - 14 - 12	14 - 12 - 10
12 x 21	12	21	14 - 12	14 - 12 - 10
13 x 24	13	24	12 - 10	10
15 x 18	15	18	16 - 12	14 - 12
15 x 20	15	20	14	12
16 x 25	16	25	12	10
17 x 18	17	18	12	10
26 x 36	26	36	12	10
26 x 40	26	10	12	10
33 x 36	33	36	12	10



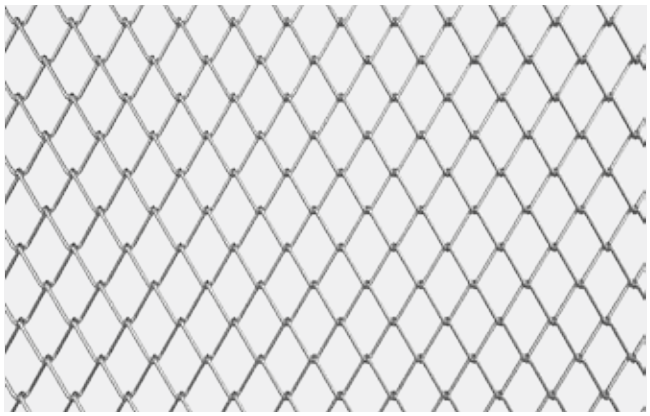
Type TN-DI



Type TN-DD



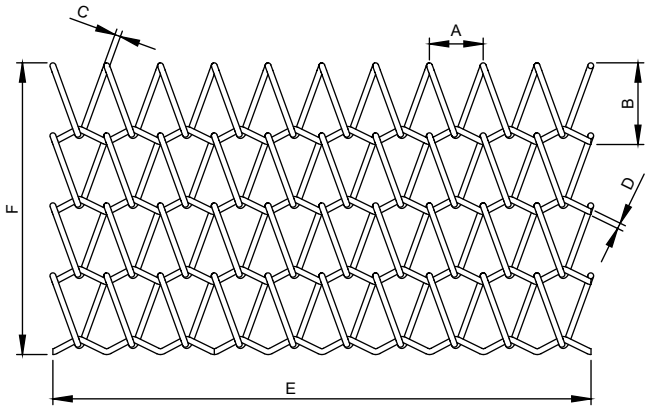
Type TN-MU



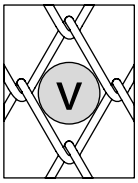
Type TN-BI

Aspects to bear in mind before making a conveyor belt

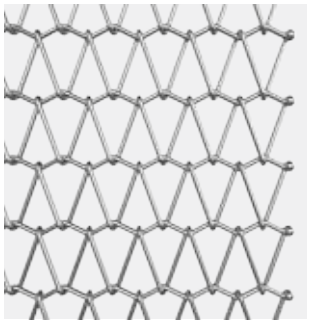
1. Determine basic measurements.



A: Spiral pitch
B: Distance between pins
C: Spiral diameter (Wire)
D: Pin diameter (Wire)
E: Width in m
F: Length in m
V: Diameter of the circumference inscribed in a rhombus



2. Conveyor Belt Termination.

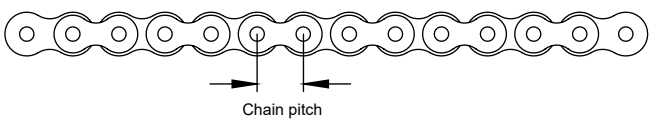


Welded Tips

Bent tips

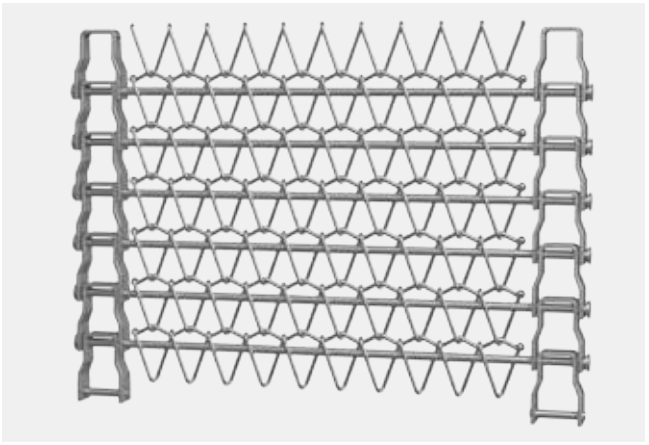
3. Drive chains and Accessories.

We have developed different types of accessories to suit your conveyor belts with a view to improving their duration and functionality. Using the chain is intended to ensure, whether the conveyor belt is there or not, improving its duration and operationality. The use of drag chains and other types of accessories usually requires minor modifications to the existing equipment, but they generate major changes to their operation. We are experienced in solutions prepared for working in extreme temperatures such as drying, warming and freezing tunnels.

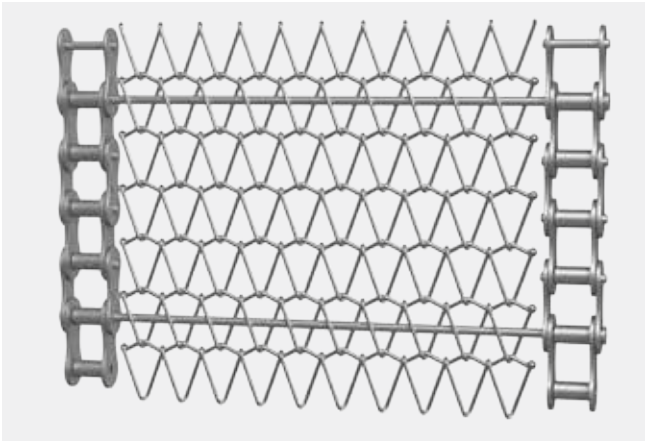


3.1 Layout of the drag pins.

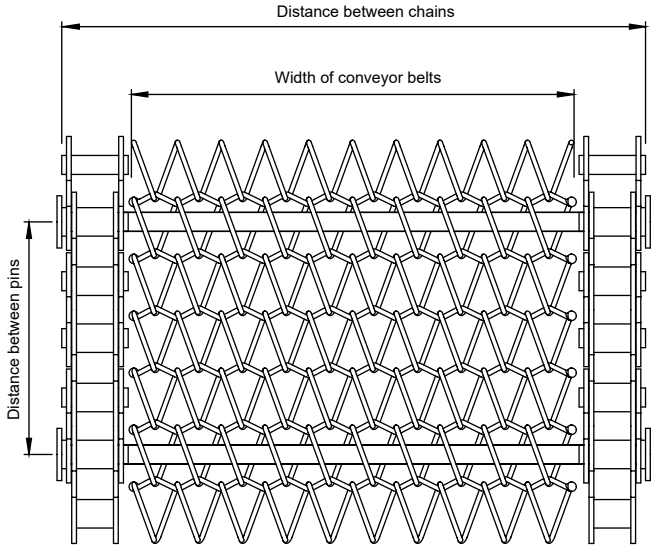
a) All the belt pins are inserted in the chain.



b) The chain is joined to the belt by means of second straight pins every certain number of chain pitches.



3.2. How to specify a chain.



How to use a Conveyor Belt?

1. Process description.
a. Product to be transported.
b. Short description of the process.
c. Maximum load in kg/m^2.
d. Measurements of the product to be transported.

2. Technical characteristics.
Look for the information from certain basic measurements.

3. Belt measurement
a. Length/width in meters.

4. Material and wire type.
a. Single galvanised wire.
b. Triple galvanised wire.
c. Stainless steel AISI 304L.
d. Stainless steel AISI 310.
c. Stainless steel AISI 306L.

5. Belt termination.
a. Bent tip.
b. Welded tip.

6. Chain.
a. No chain.
b. All the pins inserted in the chain.
c. Every certain number of pitches.

7. If working with temperature specify:

Load area Load area: ..... mm Temperature: C	**Preheating area** Length: ..... mm Temperature: C
Working atmosphere Stated in m/sec.	**Heating area** Length: ..... mm Temperature: C
Cooling area Length: ..... mm Temperature: C	**Speed** Humidity, Salinity, Acidity etc .....

Maintenance guidelines

Although it is hard to determine how long a belt will last, the causes of its premature breaks are very well known.
We would recommend compliance with certain minimum maintenance actions to increase its working life.

- Inspect the belt periodically, particularly its edges.
- Avoid lateral deviation as otherwise the edges will be damaged, reducing the working life of the belt.
- Keep the belt clean of foreign bodies.
- Pulleys and cylinders must be kept clean and in their original forms and measurements.
- Rapidly repair the damaged sectors of your belt with spirals and pins.
- By following these simple instructions and recommendations, the installation of your belt will be easier and it will work appropriately.

Installation guide

Before installation.

- Check the equipment, making sure that it is disconnected from the power.
- Check that the pulleys, cylinders and affixation supports are parallel and in good operating conditions in both directions.
- Check that the equipment is levelled and aligned.
- Release the tensioning system.

During installation.

- Carry out the installation at room temperature
- It is vital to develop the belt by keeping it slightly tensioned to prevent the windings from moving.

Before starting their operation.

- Check the guide mechanisms and the space between the edges of the belt and the guide bar.

Start-up.

- Recheck the alignment of the edges and laterally adjust where necessary.
- Set the belt in operation at a low speed and without any load for a few minutes.
- Once the belt has settled, start operating at working speed.
- Finally, if working at temperature, increase it gradually until attaining the work temperature. As a consequence of the temperature, there may be elongation of the material and so a final adjustment may prove necessary.

How to identify early breakage factors

- Owing to their design, conveyor belts are required to have a certain working life. Although it is hard to determine how long a belt will last, the causes of its premature breaks are very well known
- By knowing the three main fault factors, you will be in a position to identify the problems that reduce the working life of your conveyor belt. These factors are: **stretching, wear and tear and fatigue.**
    - Many belts fail owing to stretching which occurs when the belt is permanently working in deformed fashion (curved, freighted, misaligned). These faults usually occur owing to accidents or misuse.
    - Wear and tear occurs as a natural consequence of being an articulated mechanism or when the belt rubs against other equipment components. This results in a minor, but constant, loss in material and weakening of the area concerned.
    - Fatigue is the consequence of the development of micro cracks in the material caused by repeated loading and unloading.
- To maximise the working life of its conveyor belt, we recommend you to follow the tips during the various stages of its installation and carry out certain minimum maintenance actions.