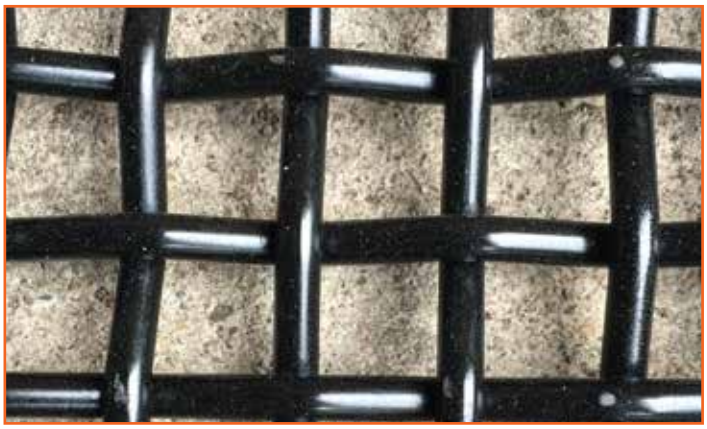
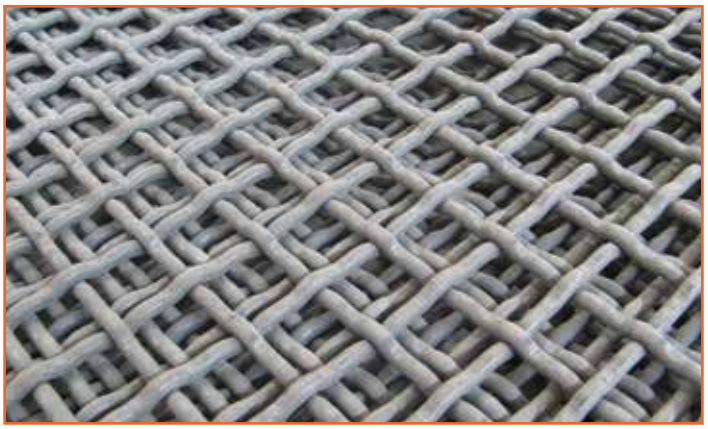
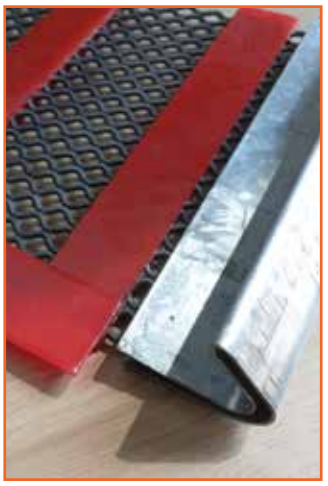
Tegman (PTY) LTD

DURBAN
GAUTENG
NELSPRUIT
CAPE TOWN

SCREENING MEDIA AND ACCESSORIES







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THEORY OF SCREENING

The objective of screening is to achieve SEPARATION and the basic principal for this is STRATIFICATION and the PROBABILITY OF SEPARATION.
In order for STRATIFICATION to take place the distribution of particle size in feed to screening surface must be suitable for screening application, the correct amount of G force is required in order to allow the larger particle sizes to rise to the top and the smaller ones to the bottom in order to find a hole to fall through.

In order for a particle to find a hole to fall through the following must be taken into consideration:

1. "G" Force
- It is critical to ensure particles are vibrated to force stratification quickly and effectively.
- Adversely affected by high installed mass.
- Adversely affected by excessive bed depth.
- Directly affects stroke and speed
- Rate of travel across screening surface.
- 10 / 900's
- G Force = (amplitude x rpm^2) / 900 000 where amplitude = stroke / 2

2. Aperture Type
- All things equal aperture does not effect stratification but low Open Area % will effect bed depth and have an impact on screening efficiency. Correct aperture type may assist with blinding and pegging.

3. Bed Depth
- A direct correlation between feed to deck and Open Area %, if your feed rate is too high the bed depth of the screen will be incorrect and this in turn will throw out all other settings (G force and rate of travel) making stratification impossible and therefore screening efficiency ineffective, this will have a negative effect on the life of your screens due to high wear as a result of poor open area.

In summary, **STRATIFICATION** is essential to ensure cost efficient screening and all of the above have an impact on stratification, if you can tune your machine to the correct settings for your application you will enjoy HAPPY, COST EFFECTIVE SCREENING.

For any assistance with the above you are welcome to contact us for any advice and solutions.

WOVEN WIRE SCREENS

Tegman is one of the very few companies that can supply a complete range of screening media and materials. Our sales staff are on hand to advise what materials and type of screen is suitable for your specific application. Tegman provides on site technical assistance and problem solving in order to ensure you obtain the best screening efficiencies possible.

Weaves Available:

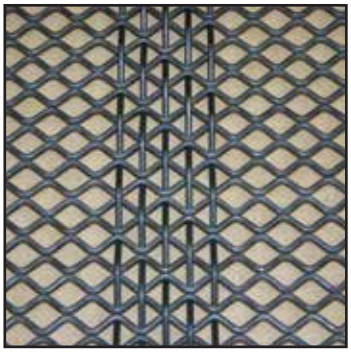
Aperture to wire ratio will determine which weave is used as standard in most cases.

1. Plain
2. Intermediate
3. Lock Crimp
4. Flat Top
5. Slotted
6. Harp - Square & Tri
7. Heavy Duty Welded Screen

Materials Available:

Mineral being screened and any contaminates will determine what material is most suitable

1. High Carbon Spring Steel
2. Stainless Steel 304
3. Stainless Steel 316
4. Any other material on request


HARP

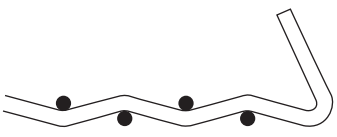

FLAT TOP

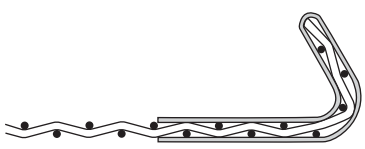

SLOTTED

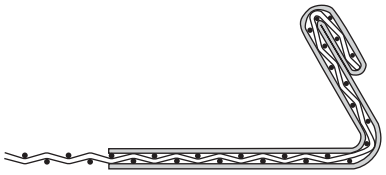

PLAIN

Hook Types Available:

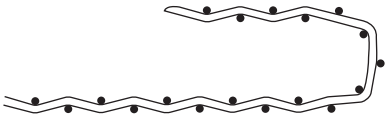
Generally the specification will determine the type of hook used.

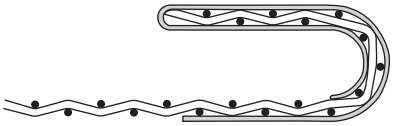

Plain 45°


45° Metal Edge


Double Fold Metal Edge


C-Shape Weld On


Plain C-Shape

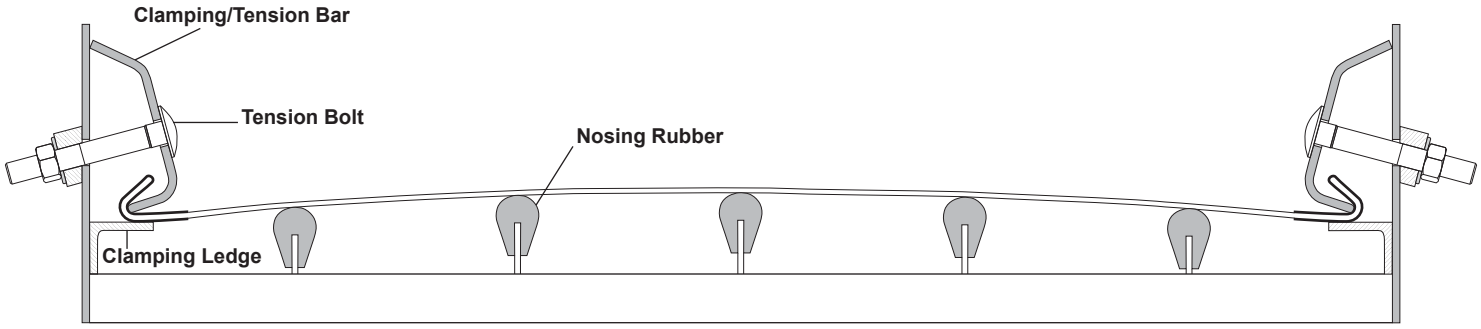

C-Shape Metal Edge

MOBILE SCREENS - SCREEN CLOTH

Tegman's mobile screening data base covers almost all mobile screen cloth requirements as per OEM specifications,all we require is the make and model of your mobile screen unit and we will quote you on the screen specifically designed for your machine.

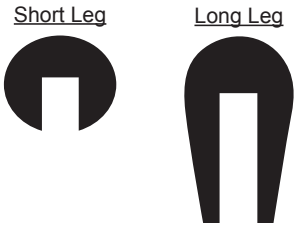
SCREEN ACCESSORIES

The following screening accessories are vital to your screening process and in order to maximize Screen cloth life we recommend you replace any of the following immediately if showing any signs of wear or damage.



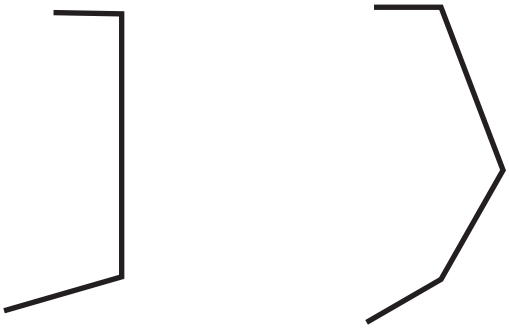
(Correct screen size determined by side plate measurement no less than 20mm each side)

Capping/Nosing Rubber



Available in short leg and long leg, supplied in 30m rolls, used as a buffer between your screen and stringer frame (camber bars)

Clamping Bars



2 BEND
CLAMPING PLATE

3 BEND
CLAMPING PLATE

Supplied in 2 bend or 3 bend depending on the vibrating screen make, either with holes or without. For hole detail Tegman can send a drawing to be completed in order to ensure holes are punched in correct sequence.

Clamp / Tensioning Bolt

Available in M20, 140, 160 and 200 long. Manufactured from 8.8 high tensile material.
Our complete bolt assembly includes:
Cup square bolt, dome washer, plain washer, hex nut, all 8.8.
All parts are also sold separately.

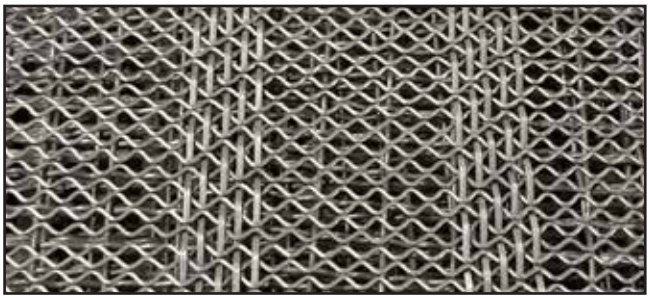
Dome Washer, Hex Nut, Plain Washer

Complete Bolt Assembly

EAZI FLOW SCREENS

Self Cleaning and High Efficiency Screens

Tegman manufacture and supply self cleaning screens know as Eazi Flow Screens.
The advantage of Eazi Flow Screens is the use of Polyurethane binding wear bands as opposed to traditional wire ripple screens that use thin wire to bind the screen.



Once these binding wires wear the entire screen falls apart often prematurely.

Polyurethane wear bands are far more abrasive resistant and much stronger than wire in a screening application.

The following advantages can be associated with Eazi Flow Screens:

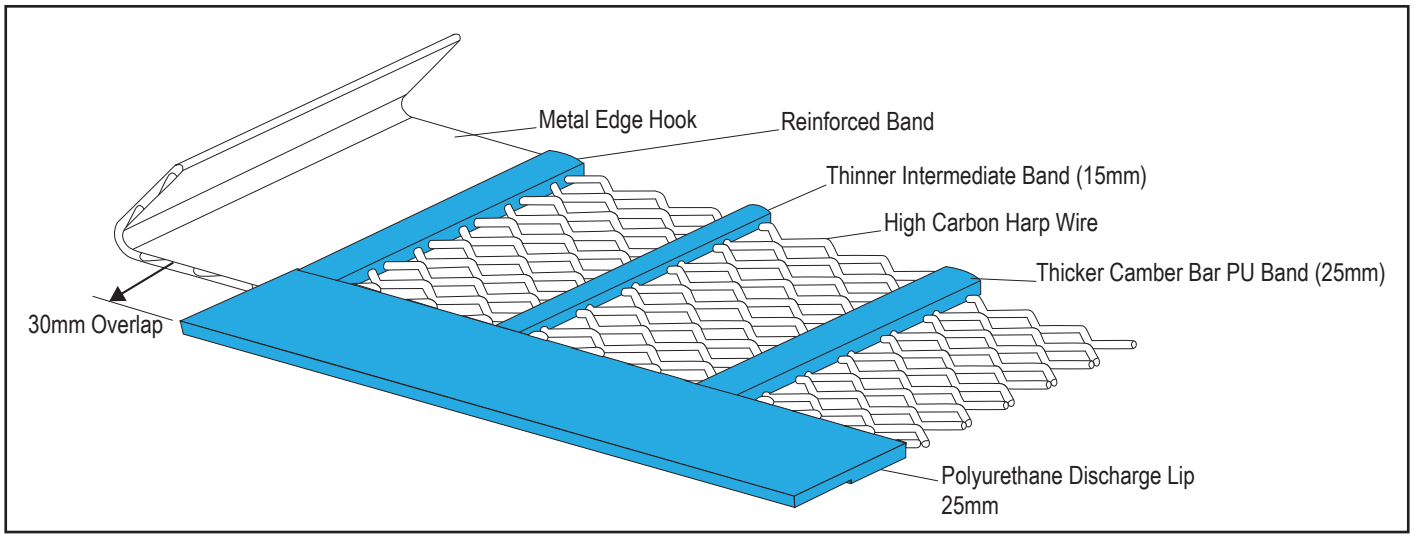
- Large open area
- Reduced pegging and blinding
- High wear and abrasion resistance
- Good performance with wet screening
- **High screening efficiency**

A very important factor for screening efficiency of Eazi Flow is the positioning of the camber bar wear bands, and correct placing will further expand the life of your Eazi Flow Screens, it is important that the main PU wear bands fall over the camber bars.

Tegman has done extensive testing of the Eazi Flow Screen in order to determine the correct distance of the PU bands between the camber bars, called intermediate bands, by doing this and calculating aperture to wire ratio you will receive the best possible efficiency and life of your Eazi Flow Screen due to a very lively screen.

Through all our testing it has proven far more efficient if only the Camber Bar PU bands are cast at 25mm, the alternate PU Bands called intermediate bands are cast at 15mm, allowing for more open area and far more screening efficiency. We have also determined that premature failure occurs by the hook edge close to the metal edge therefore we cast reinforced PU bands along the hook edge.

Typical Manufacture Detail of Tegman Eazi Flow Screens



APERTURE VERSE WIRE THICKNESS

Often apertures with a far too thick wire are ordered and with screening it is all about efficiency, therefore open area is extremely important. The more holes you have the greater chance your product will find a hole to pass through and that in turn will minimize the sliding abrasion over your screens.

Screen life is often confused with screen efficiency, most would like to see their screens last for months and with that in mind, order the thickest wire possible for the aperture. However, the screen will have far less holes which allows your product to spend more time on the screens wearing them down rather than passing through.

The decision remains, life of the screens or higher plant efficiency which result in more tonnages being screened.

The below table illustrates the suggested aperture verse wire for a specific feed size and kilogram per cubic meter for square apertures.

A Heavy	1901 to 2250 kg per cubic meter. Heavy ores : High abrasives
B Medium Heavy	1601 to 1900 kg per cubic meter. Moderate ores : Moderate abrasives
C Medium	1201 to 1600 kg per cubic meter. Moderate abrasives, limestone, gravel
D Light	801 to 1200 kg per cubic meter. Coal, non-abrasives

	A HEAVY		B MEDIUM HEAVY		C MEDIUM		D LIGHT		FEED SIZE		
APERTURE	WIRE	Oa%	WIRE	Oa%	WIRE	Oa%	WIRE	Oa%	1	2	3
100	20	69	16	74	12.5	79	11.2	81	180	215	250
90	16	72	12.5	77	11.2	79	10.0	81	150	190	230
76	16	68	12.5	74	11.2	76	10.0	78	150	190	230
70	12.5	72	11.2	74	10.0	77	9.0	79	125	165	200
65	12.5	70	11.2	73	10.0	75	10.0	75	125	165	200
56	12.5	67	10.0	72	9.0	74	8.0	77	125	165	200
50	12.5	64	10.0	69	9.0	72	8.0	74	125	165	200
48	11.2	66	9.0	71	8.0	73	7.1	76	115	140	180
44	11.2	64	9.0	69	8.0	72	7.1	74	115	140	180
42	11.2	62	9.0	68	8.0	71	6.0	77	115	140	180
38	10.0	63	8.0	68	7.1	71	6.0	75	100	125	150
36	10.0	61	8.0	67	6.0	73	5.6	75	100	125	150
32	10.0	58	8.0	64	6.0	71	5.0	75	100	125	150
28	9.0	57	7.1	64	6.0	68	5.0	72	90	115	130
25	8.0	57	6.0	65	5.6	67	5.0	69	90	115	130
22	7.5	56	5.6	64	5.0	66	4.5	69	75	95	115
19	7.1	53	5.6	60	4.5	65	4.0	68	75	95	115
16	6.0	53	5.0	58	4.5	61	3.6	67	65	80	95
14	5.0	54	4.5	57	4.0	60	3.15	67	65	80	95
12	5.0	50	4.5	53	3.6	60	2.8	66	50	65	75
11	4.5	50	4.0	54	3.15	60	2.8	64	50	65	75
10	4.0	51	3.6	54	3.15	58	2.5	64	38	50	65
8	3.6	48	3.15	51	2.8	55	2.0	64	38	50	65
6	3.15	43	2.8	46	2.5	50	1.8	59	25	38	50
5	2.5	44	2.0	51	1.6	57	1.2	65	19	25	38
3	2.0	36	1.8	39	1.4	46	1.0	56	16	19	25
2	1.25	38	1.0	44	0.9	48	0.71	54	12	16	19
1.6	1.0	38	0.9	41	0.8	44			10	12	16
1.4	0.9	37	0.8	40	0.71	44			8	10	12
1.25	0.8	37	0.71	41					6	8	10

Wire sizes listed above are suitable for feed sizes in column 1. When feed size exceeds column 1, but not column 2 use the next larger wire (if available). When it exceeds column 2 but not column 3 increase wire diameter 2 sizes (if available). When column 3 is exceeded a relief deck is recommended to increase life of wire.

We suggest once you have installed new screens allow the deck to run empty for 5 minutes, stop the machine re-tighten tensioning bolts, ensure there is nosing rubber on camber bars at all times to avoid premature failure of screens.

POLYURETHANE PRODUCTS

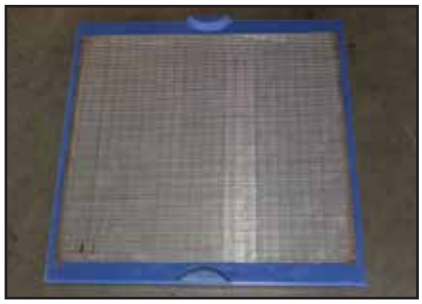
Polyurethane was introduced into the screening world during the mid-fifties and has since become one of the most acceptable mediums used for manufacturing screen surfaces.

Tegman Supplies the following Polyurethane Products:

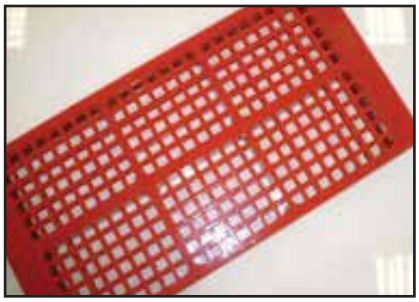
Polyurethane Panels

Panels in various sizes - 305 x 305, 305 x 610, 610 x 610 and others on request

305 x 305

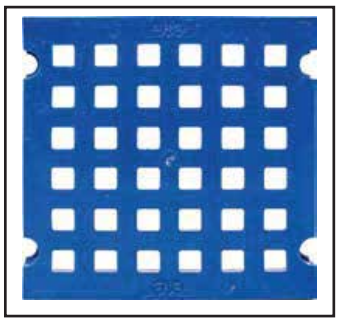


610 x 610

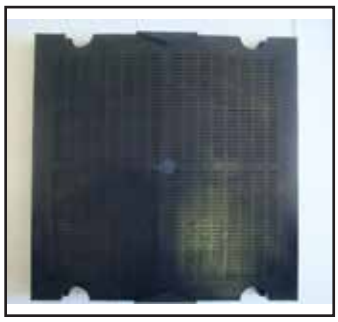


350 x 610

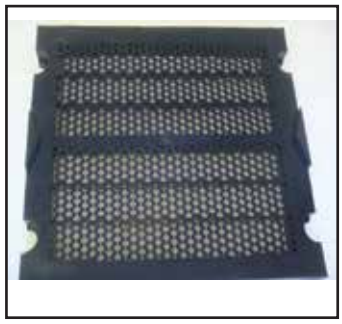
The following aperture types are available:



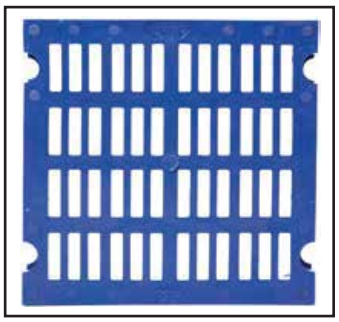
Square



Small Slotted



Non Blinding



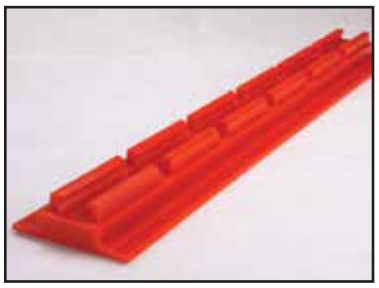
Large Slot

Accessories Available:

Pins and Sleeves

Side Liners

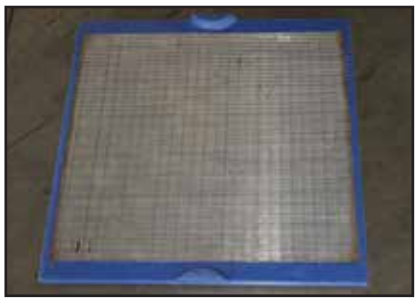
Brackets and Wedges



Clip Rails

Poly Wedge Panels, Poly Wire Panels and Poly Perf Panels

Available in all the same panel sizes as our PU panels in many aperture types and in a variety of fixing methods.



Poly Wedge 610 x 610

Poly Wire 305 x 610

Poly Perf 305 x 610

Poly Perf 610 x 610

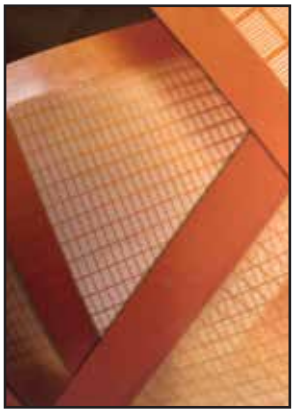
Poly Wedge L Shape 305 x 305

High Frequency Mats

HFM are designed to allow screening with very small apertures manufactured from Polyurethane utilized in fine screening applications and fit most Derrick Screens.

High Frequency Mat

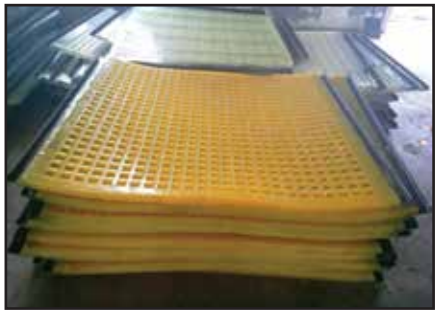
Wire Coated with PU



High Frequency Screen

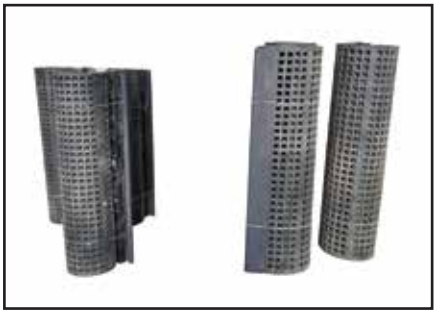
Polyurethane Mats

Our PU Mats are manufactured to suite each clients specific requirements, manufactured in either Polyurethane or rubber with hook edges or bolt down. Many aperture types available.



Polyurethane Hook Mat

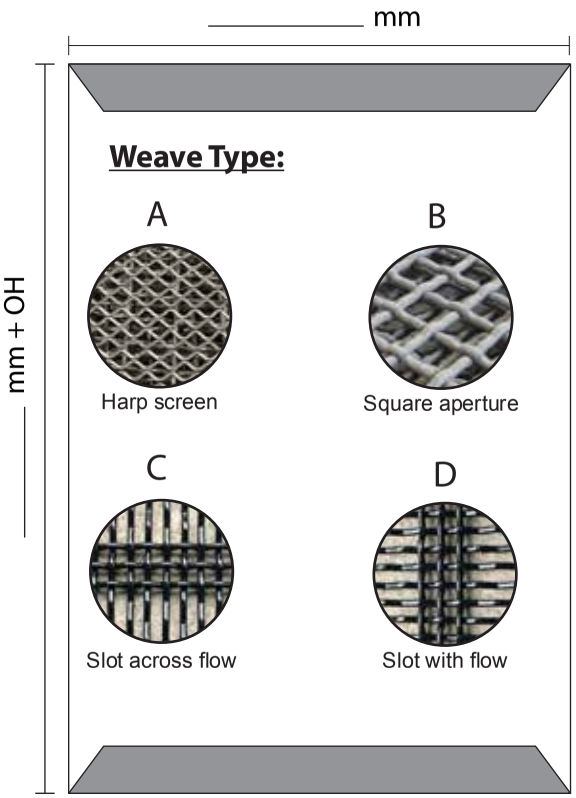
Rubber Hook Mat



Rubber Flex Mat

Tegman can supply any polyurethane or rubber product in a screening application if a sample can be provided or measured.

SCREEN SELECTION



Weave Type:

A

Harp screen

B

Square aperture

C

Slot across flow

D

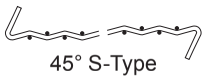
Slot with flow

Hook Type:

Wire Only

Plain 45° ☐

Plain C-Shape ☐



45° S-Type ☐

Plain C-Shape S-Shape ☐

Weld On

45° Weld On ☐

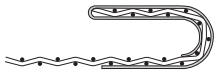
C-Shape Weld On ☐

45° S-Type Weld On ☐

C-Shape S-Shape Weld On ☐

Metal Edge

45° Metal Edge ☐



C-Shape Metal Edge ☐

45° S-Type Metal Edge ☐

C-Shape S-Shape Metal Edge ☐

Double Fold Metal Edge ☐

Machine Type: Static ☐ Mobile ☐

Aperture: _____ Wire: _____

Material: _____ Quantity: _____

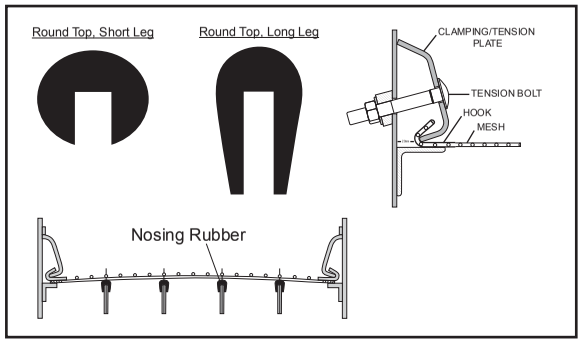
Weave Type: A ☐ B ☐ C ☐ D ☐ If Slot: Slot with flow ☐ Slot across flow ☐

If Harp: Tri ☐ Square ☐

Accessories Available:

Nosing Rubber ☐ Tension Bolts ☐

J-Bolts ☐ Clamping Plate ☐



CUSTOMER INFORMATION

COMPANY:

CONTACT PERSON:

CONTACT NUMBER:

EMAIL:

SIGNATURE:

Tegman (PTY) LTD

PROUDLY LEVEL 2 B-BBEE (52%)

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GET IN TOUCH

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