



POCKETGUIDE TO SCREENCLOTHS



QTY	LENGTH	WIDTH	APERTURE	WIRE SIZE / THICKNESS		
UNIT:						
]			
UNIT:						
][
UNIT:						
UNIT:				1		

LOCKER GROUP

VICTORIA

Dandenong South - Head Office 2 Cojo Place Dandenong South VIC 3175 Ph: +613 8791 1000 Fax: +613 8791 1099

> Sunshine 47 Strzelecki Ave Sunshine VIC 3020

NEW SOUTH WALES 5 Enterprise Circuit Prestons NSW 2170

Newcastle Unit 2/8 Channel Rd Mayfield West NSW 2304

> **QUEENSLAND** Brisbane 601 Boundary Rd Darra QLD 4076

> Townsville 28 Camuglia St Garbutt QLD 4814

SOUTH AUSTRALIA Adelaide Unit 8/5 Drury Terrace Clovelly Park SA 5042

WESTERN AUSTRALIA Perth 3 Temperley Close Welshpool WA 6106

NORTHERN TERRITORY Darwin Unit 5/2 College Rd Berrimah NT 0828

To contact your nearest local branch please call 1800 635 947

NEW ZEALAND

Auckland Head Office: 12 Offenhauser Drive East Tamaki, Auckland Wellington Cnr Hutt Rd & The Esplanade Petone, Wellington Christchurch 37 Mandeville Street, Riccarton, Christchurch

To contact your nearest local branch please call 0800 285 837







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Every effort has been made to obtain accuracy, but no liability is accepted by the Company for any errors or for opinions expressed in this publication.





THE SCREENING PROCESS

Screening is the process where materials of varving sizes are separated into group sizes. These sizes are generally expressed as Passing or Retained. A "- 20 mm + 12 mm" aggregate will pass a 20 mm aperture and be retained on a 12 mm aperture.

Material presented to a screencloth will move along the surface as a result of vibration transmitted to the screencloth via an out of balance shaft or vibration motor. This vibration is known as Amplitude and is measured from the top to bottom of its stroke.

The g-force* created by the amplitude must therefore be sufficient to aid the flow of material over the screencloth surface to at least tilt particles over the crimps of the woven wire. Additionally, the g-force must be sufficient to lift out particles caught in the aperture but unable to pass.

Therefore the a-force must be greater the larger the particle, the heavier the load, the lower the slope, and if the particle has a tendency to peq.

The table below is a guide only for sizing/scalpa screens, with a 20° slope and a circular motion. For specific recommendations, please refer to your screening equipment manufacturer.

Amplitude (mm)	G-Force (m/s²)
6.0	3.6
8.0	3.6
12.0	3.6
	Amplitude (mm) 6.0 8.0 12.0

*A unit of force equal to the force exerted by gravity; used to indicate the force to which a body is subjected when it is accelerated.

THE SCREENING PROCESS

When a mass of particles many grains deep is presented to a screencloth surface, the coarse and fine particles are likely to be mixed indiscriminately, with the result that many undersize particles are supported in the mass above, and away from the screencloth surface.

If the particles are free to move amongst themselves, ie, not sticky, any subsequent vibration is sufficient to enliven the mass above thoroughly without lifting it from the screencloth surface, then STRATIFICATION has occurred with fine particles at the bottom and the coarser at the top. (Fig 2)



Such stratification is essential and is as much the purpose of the motion imparted to the screening surface as the transport of the oversized particles and prevention of pegging.

Excessive vibration, while it increases the ability of the screencloth to move the particles along its surface, defeats stratification and thereby decreases efficiency.

EFFICIENCY

Efficiency is expressed as a percentage and refers to the percentage of undersized particles in the original feed which has actually passed through an aperture.

Weight of undersize passed x 100 = Efficiency Weight of undersize in feed

Example - 100 tph (tonnes per hr) contains 85 tph undersize and 15 tph oversize.

If 80 tph passes and 20 tph is rejected the efficiency would be:

80 85 x 100 = 94.11% Efficiency







SCREENCLOTH INFORMATION

MATERIAL SELECTION

High Tensile Steel

The most commonly used material used in Australasia (AISI 1062 grade steel). Recommended for screening applications as the wire contains a carbon and manganese content to enhance its abrasion resistance.

Welding High Tensile Steel

The following welding consumables are generally recommended for welding wire screens.

307 type stainless steel or 312 type stainless steel

Please contact Locker Group for further information on different welding consumables to suit your welding process.

Stainless Steel

Commonly used in fine mesh aperture specifications and a popular choice for larger aperture specifications where corrosion, oxidising conditions and galvanic reaction occur.

Unless requested AISI Type 304 stainless steel is supplied. AISI Type 316 is available in some specifications.

Other Materials

Brass, copper etc available on request.



The images below cover Locker Group's standard screening range. These are detailed in the following pages. Please contact your technical representative for detail, regarding non-standard or custom requirements.





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APERTURE SELECTION (cont.)

The selection of apertures to produce a given product size can be a complicated process and is governed by many of the following.

- (a) Inclination of the screen
- (b) Thickness of the screencloth surface
- (c) Shape of the aperture
- (d) Shape of the product
- (e) Speed of the screen unit (rpm)
- (f) Amplitude of the screen unit
- (g) Moisture content of the product
- (h) Rate of feed of material to the screencloth

In practice, it is normal to consider the angle of inclination of the screen and the thickness of the screencloth surface together with the shape of the product as the subsidiary factor.





25% OPEN AREA



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All the same aperture, but different wire diameter

EFFECTIVE APERTURE

Generally an aperture 1.1 times the desired product size will provide good results, but again other factors must be taken into consideration, including the angle of the screen.

e.	
ANGLE	EFFECTIVE APERTURE
8°	99%
15°	95%
20°	90%
30°	82%



WIRE DIAMETERS



APERTURE TOLERANCE

Locker Group adopt a standard manufcturing tolerance of +5% nominal aperture. This is inline of ISO4783 Part 3:1981. Clients requiring greater precision should consult with their Technical Representative.

RECTANGULAR APERTURE SPECS

When ordering Hi-ton or Longslot specifications please advise in which dimension you require the longer aperture dimension to run parallel with.





Long Aperture Parallel with Length. (ie. parrallel to hook) Long Aperture Parallel with Width (ie. perpendicular to hook)





To calculate the approximate kg/m^2 of any given specification of woven wire in steel use the following formula. For stainless steel add 0.98% to your calculated answer.

Square Aperture





Fig 7

Hi Ton Aperture



Long Slot Aperture (Triple Wire)



 $= \left(\frac{17.44}{52+8+8+315+315+315} + \frac{6.35}{8+315}\right) \times (3.15 \times 3.15)$



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OPEN AREA

The open screening area of screencloths is the clear area of all the apertures and is generally expressed as a percentage in relation to the total area.

Square Aperture





area where

Hi Ton Aperture

 D^2

Formu

la	=	$\left(\frac{A^1}{M^1} \times \frac{A^2}{M^2}\right) \times 100 = \% \text{ open}$
A ¹	=	larger Aperture

- = adjacent diameter
- = A1 + D1
- = smaller aperture
- adjacent diameter
 A2 + D2



Fig 11

Long Slot Aperture (Triple Wire)

The open area of a longslot may be expressed in two ways:

- (a) The area of all apertures
- (b) The area of longslot apertures only

Locker Group recommend that you use Option (b) if in your opinion the material being screened by the longslot specification may blind the small square apertures.

- Where A = long dimension Aperture a = small dimension aperture d = diameter of wire
 - a + d
 - m = a+dt = A+a+a+d+d+d

Option (a) Open Area all Apertures

Formula =
$$\left(\frac{A \times a + a^2 + a^2}{t \times m}\right) \times 100 = \%$$
 open area

Option (b) Open Area Longslot Apertures only

Formula =
$$\left(\frac{A \times a}{t \times m}\right) \times 100 = \%$$
 open area









Fia 13

Fia 14

LENGTHS OF SCREENCLOTHS

We recommend that all screencloth dimensions be in mm to the nearest 5 mm ie,

6 feet = 1829 mm = 1830 mm 8 feet = 2438 mm = 2440 mm

The length of a screencloth with hooked edges should be the same length as the length of the clamping bar, to provide for correct tensioning.



CLAMPING BAR EQUAL TO SCREENCLOTH

We **DO NOT** recommend the tensioning of two or more screencloths with a single clamping bar, as variation in screencloth width does occur, resulting in the wider cloth not being held in correct tension.



When joining screencloths which are 16.0mm Aperture and/or 5.0mm Diameter and finer, we recommend that the screencloths be overlapped by a minimum of 25 mm, to help seal the deck.



To order simply advise:

Total overall length (screencloth length + overlap)

WIDTHS OF SCREENCLOTHS

If ordering WITHOUT HOOKS please order width as FLAT.

For standardisation of screencloths with hooked edges we measure as '**OVERALL HOOKED EDGES''** (OAHE) in mm to the nearest 10mm. ie. 1485 = 1480 oahe 1486 = 1490 oahe.



Generally the overall hooked edge dimension is the inside dimension of the unit less 40 mm. This provides for 20 mm clearance to each side of the screencloth.



Where the length of the hooked edge side is less than the other dimension, we still refer to the "overall hooked edge" dimension as the width.



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ROTARY/TROMMEL SCREENCLOTHS

High Tensile Steel

We recommend dimensions be in (mm) and where possible a sketch provided.

Information required is:

- (a) Quantity of screencloths
- (b) Number of segments per circumference or angle
- (c) Length of overlap or turnup (Fig 20 + 22)
- (d) Diameter required (inside or outside) (d)
- (e) Length of screencloth (l)

Examples



One screencloth **I** length rolled to **d** diameter.



Four screencloths each I length rolled to **r** radius to suit **d** diameter.



One screencloth **/** length rolled to **d** diameter with **O** overlap



Two screencloths each *I* length rolled to *r* radius to *d* diameter with 90° turn ups each *t* long.

WOVEN WIRE

FINE MESH APERTURE SPECIFICATIONS

NORMAL APERTURE (mm)	MESH (per inch)	DIAM (mm)	OPEN AREA %	KG/ m²
0.05	300	0.031	40	0.156
0.095	180	0.045	42	0.184
0.1	150	0.07	35	0.37
0.16	100	0.10	38	0.49
0.18	80	0.13	38	0.67
0.25	60	0.16	37	0.81
0.32	50	0.18	38	0.82
0.40	40	0.22	41	0.99
0.48	36	0.23	44	0.94
0.56	30	0.28	45	1.18
0.71	20	0.56	31	3.1
0.90	20	0.36	51	1.3
1.0	16	0.56	42	2.5
1.3	14	0.56	47	2.2
1.4	12	0.71	44	3.0
2.0	10	0.56	60	1.56
2.5	8	0.71	60	2.0
2.2	8	0.9	51	3.3
2.5	8	0.56	67	1.3
3.2	6	0.9	61	2.54
4.8	4	1.6	57	4.93
5.0	4	1.3	65	3.1
7.1	3	1.6	65	3.7
11.2	2	1.6	76	2.5
25.0	1 ¹ /8	3.15	79	4.5

*The above specifications are the most popular/standard specifications. For intermediate specifications not listed, please contact your technical representative.



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SQUARE APERTURE SCREENCLOTH SPECIFICATIONS APERTURE DIAMETER OPEN (mm) (mm) AREA ACTUAL % 3.15 2.0 37 3.15 2.5 31 4.0 2.5 38 5.0 2.5 44 5.0 3.15 38 5.6 3.15 41 6.3 2.5 51 6.3 3.15 44 7.15 3.15 48 8.0 3.15 51 8.0 4.0 44 9.0 4.0 48 10.0 51 4.0 10.0 5.0 44 11.2 54 4.0 11.2 5.0 48 12.5 5.0 51 13.2 53 5.0 14.0 5.0 54 15.0 5.0 56 16.0 5.0 58 16.0 6.3 51 18.0 6.3 55 19.0 6.3 56

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* For other non standard specifications, please contact your technical representative.

KG/

m²

9.9

14.1

12.2

10.6

15.5

14.8

9.0

13.7

12.6

11.6

16.9

15.6

14.5

21.2

13.4

19.6

18.1

17.7

16.7

15.9

15.1

22.6

20.7

20.0

SQUARE APERTURE SCREENCLOTH SPECIFICATIONS

APERTURE (mm) ACTUAL	DIAMETER (mm)	OPEN AREA %	KG/ m²
20.0	6.3	58	19.2
20.0	8.0	51	29.0
20.6	6.3	59	18.8
22.4	8.0	54	26.7
25.0	6.3	64	16.1
25.0	8.0	57	24.6
28.0	8.0	61	22.6
31.5	8.0	64	20.6
35.0	10.0	60	27.9
38.0	8.0	68	16.0
40.0	8.0	69	16.9
40.0	10.0	64	25.4
45.0	10.0	67	23.1
45.0	11.2	64	28.4
50.0	8.0	74	13.8
50.0	10.0	69	21.2
50.0	12.5	64	31.8
56.0	11.2	69	23.7
63.0	11.2	72	21.5
63.0	12.5	70	25.1
75.0	11.2	76	18.6
75.0	12.5	72	22.8
100.0	12.5	79	17.6



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I



SQUARE APERT	URE SCREENCLO	TH SPECIFICATION	S
APERTURE (mm) ACTUAL	DIAMETER (mm)	OPEN AREA %	KG/ m²
3.15	1.6	44	6.8
3.15	2.0	37	9.9
4.05	2.0	44	8.5
4.05	2.5	38	12.2
5.1	2.5	44	10.6
5.7	2.5	48	9.8
6.3	2.5	51	9.0
6.35	3.15	44	13.7
7.15	3.15	48	12.6
8.05	3.15	51	11.6
9.0	4.0	48	15.6
9.50	4.0	49	15.0
9.6	2.5	63	6.6
9.85	3.15	56	10.0
10.0	4.0	51	14.5
11.2	4.0	54	13.4
12.25	2.0	74	3.6
12.3	4.0	57	12.3
12.5	5.0	51	18.1
12.95	2.5	70	5.1
13.15	3.15	65	7.7
13.9	5.0	54	16.7
14.45	2.5	73	4.7
15.15	5.0	56	15.7

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* For other non standard specifications, please contact your technical representative.

SQUARE APERTURE SCREENCLOTH SPECIFICATIONS

APERTURE (mm) ACTUAL	DIAMETER (mm)	OPEN AREA %	KG/ m²
15.55	4.0	63	10.4
16.05	5.0	58	15.1
17.15	2.5	76	4.0
17.15	5.0	60	14.3
18.05	5.0	61	13.8
19.0	5.0	63	13.3
19.85	6.3	58	19.2
22.4	5.0	67	11.6
22.7	6.3	61	17.6
25.0	5.6	67	13.0
25.05	6.3	64	16.1
28.5	8.0	61	22.6
30.7	6.3	69	13.3
35.0	8.0	66	18.9
37.5	8.0	68	17.6
40.2	8.0	69	16.9
43.11	8.0	71	16.0
49.35	8.0	75	14.0
57.25	8.0	77	12.3
63.2	10.0	74	17.4
65.2	8.0	79	11.1
81.5	10.0	79	14.1
98.75	10.0	82	11.5

NEW ZEALAND



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SPLIT POLY RIPPLE SPECS APERTURE WIRE DIAMETER (mm) (mm) 2.5 2.5 2.5 3.15 3.0 2.5 3.0 3.15 3.5 2.5 3.5 3.15 4.0 2.5 4.0 3.15 4.0 4.0 4.5 3.15 4.5 4.0 5.0 4.0

6.0

7.0

7.5

9.0

10.0

11.0

12.5



4.0

4.0

4.0

5.0

5.0

6.3

6.3

* For other non standard specifications, please contact your technical representative.



WIRE RIPPLE SPECS

APERTURE

(mm)

2.5

3.15

4.0

4.0

4.5

4.5

5.0

5.0

5.6

6.3

6.3

7.1

7.1

8.0

8.0

9.0

10.0

10.0

10.5

11.2

11.2

12.5

14.0

14.0

16.0

16.0

18.0

20.0

22.4

WIRE DIAMETER

(mm)

1.25

1.6

1.6

2.0

1.6

2.0

2.0

2.5

2.0 2.0

2.5

2.5

3.15

2.5

3.15

2.5

2.5

3.15

2.5

2.5

3.15

3.15

3.15

4.0

3.15

4.0

4.0

4.0

4.0

POLY RIPPLE SPECS

APERTURE (mm)	WIRE DIAMETER (mm)	APERTURE (mm)	WIRE DIAMETER (mm)
2.5	1.25	12.5	3.15
3.15	1.6	13.2	3.15
4.0	1.6	13.2	4.0
4.0	2.0	14.0	3.15
4.5	1.6	14.0	4.0
4.5	2.0	14.0	5.0
5.0	2.0	15.0	3.15
5.0	2.5	15.0	4.0
5.0	3.15	16.0	3.15
6.3	2.0	16.0	4.0
6.3	2.5	16.0	5.0
6.3	3.15	18.5	5.0
7.1	2.5	20.0	3.15
7.1	3.15	20.0	4.0
8.0	2.5	20.0	5.0
8.0	3.15	21.5	6.3
9.0	2.5	22.4	4.0
9.0	3.15	22.4	6.3
10.0	2.5	24.0	5.0
10.0	3.15	25.0	4.0
10.0	4.0	25.0	5.0
10.5	4.0	25.0	6.3
11.2	3.15	28.0	6.3
11.2	5.0	31.0	4.0
11.5	3.15	31.5	6.3
11.5	4.0		





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TYPES OF HOOKED EDGES

Generally the specification will determine the type of hook used. Following are some examples of standard hooked edges. If using heated screencloths please advise at time of ordering. For non-standard hook requirements please consult with your Technical Representative.

Fia 24



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Plain Wire

Standard Sneath M





HOOK ORIENTATION

It is important to nominate hook orientation, from the list below, when ordering screens.



CENTRE HOLES FOR DOUBLE CAMBER

If you require us to provide the screencloth with holes to suit your centre hold down bar please provide the following dimensions (and where possible a sketch) together with the diameter of each hole.



Fig 28

Typical Sketch

1. Side Tension

Most common on inclined screens

3: End Tension

Most common for screens in mobile plants



PIANO WIRE

HARP SCREEN TYPE CHART						
APERTURE	LIGHT DUTY	STANDARD DUTY	HEAVY DUTY	EXTRA HEAVY DUTY		
(mm)	Wire Dia. (mm)	Wire Dia. (mm)	Wire Dia. (mm)	Wire Dia. (mm)		
1.00			0.70	0.80		
1.25			0.70	0.80		
1.50			0.70	0.80		
1.75		0.70	0.80	1.00		
2.00		0.70	0.80	1.00		
2.50		0.70	0.80	1.00		
3.00	0.70	0.80	1.00	1.25		
4.00	0.80	1.00	1.25	1.40		
5.00	1.00	1.25	1.40	1.60		
6.00	1.00	1.25	1.40	1.60		
7.00	1.25	1.40	1.60	1.80		
8.00	1.25	1.40	1.60	1.80		
9.00	1.40	1.60	1.80	2.00		
10.00	1.40	1.60	1.80	2.00		
11.00	1.60	1.80	2.00			
12.00	1.60	1.80	2.00			
14.00	1.80	2.00				
16.00	1.80	2.00				

* For other non standard specifications, please contact your technical representative.





Light Duty

Use for screening wet sticky materials where screening is very difficult or for very high throughput.

Standard Duty

Use for screening damp materials where screening is difficult offers reasonable throughput.

Heavy Duty

Use for screening dry abrasive materials, and it will give lower throughput.

Extra Heavy Duty

Use for screening very abrasive, very dry free flowing materials and it will give very low throughput.

METAL SPACERS* Used to maintain the integrity of the aperture. Flat bar support



Capping rubber on flat bar support

Hook Orientation

Piano wire screens use hooks orientation in either (3 or 4).

Type 3 is the most common for end extension Piano Wires in mobile screening plants.



* Locker Group plastic spacers are also available on request







RUBBER

RUBBER MOULDED SCREENS

Rubber moulded screens are used for impact and abrasion resistance, from medium duty right through to the heaviest impact applications. Compression moulded, heavy duty rubber panels with tapered aperture for high impact/load conditions, offers long life, flexibility and reduced noise.

Rubber moulded screens come in the following lengths and widths: Length varies from 600mm to 2400mm Width varies from 300mm to 1500mm

Thickness Guide

APPLICATIONS	OVERALL THICK (mm)	PLATE THICK (mm)
Medium Duty	40	6
Medium Duty	50	6
Medium Duty	60	8
Medium Duty	70	8
Heavy Duty	80	8
Heavy Duty	100	10
Heavy Duty	120	10

REINFORCING PLATE

* For other types of reinforcing please contact your technical representative



RUBBER TENSION MATS

Rubber screen cloths come in the following standard thicknesses 3. 5. 7. 10. 15. 25. 35 & 50mm. and 1220 & 1525 widths.



HOOK TYPES



* For other non standard specifications, please contact your technical representative.

Hook Type - SD Standard hooking detail for rubber thicknesses 3 to 25mm

Hook Type - SR Standard hooking detail for rubber 35mm thick & above. 70mm aperture & below

Hook Type - HD - 110 Heavy Duty bolt through fixing for rubber 35mm thickness







RUBBER TENSION MATS - APERTURE SPECIFICATIONS

QUARE				APERTURE (mm)	CENTRES (mm)	OPEN AREA %
APERTURE	CENTRES	OPEN AREA		75	105	F1
(mm)	(mm)	%		75	110	51
3	6	25		80	120	23
4	7	33		90	140	40
5	8	39		110	140	17
6	10	36		120	170	4/ 50
7	11	40		120	100	17
8	14	33		140	200	10
9	15	36		150	225	47
10	16	39		170	245	48
11	17	42		200	280	51
12	18	44		200	200	51
13	21	38				
15	23	43				
16	26	38				
18	30	36	L 1			нн
20	32	39		-0-0-		юн
22	35	40		┝╋╋╋	-0-0	нон
25	40	39		┝╋╋╋		нон
26	41	40		┥┛┥┛╸		нн
28	43	42		┥┙┥┙	┶┝┺	нн
30	45	44		╺┧╌┫╌┨╌┠╴		нн
32	50	41		╶┧╌┥┟╴	1-1-1-	
35	53	44		╺╞╼┲╼╞╼┲	1-17-	пнн
38	56	46		╺┓╼┎╸┓╼┎╸	1-M-	пп
40	58	48				0-0-
42	62	46	. 1			
45	65	48				
48	68	50				
50	70	51				
55	77	51				
60	85	50		* For other	non stan	dard

* For other non standard specifications, please contact your technical representative. directio

RUBBER TENSION MATS - APERTURE SPECIFICATIONS

CIRCLE

APERTURE (mm)	CENTRES (mm)	OPEN AREA %
7	11	37
8	13	35
9	14	38
10	15	41
12	18	41
15	23	39
18	28	38
20	31	38
23	35	40
25	37	42
30	42	47
35	47	51
40	55	49
45	60	52
50	65	55
55	70	57
60	80	52
65	90	48
70	100	45
75	105	47
80	110	49
90	125	48

APERTURE (mm)	CENTRES (mm)	OPEN AREA %
100	135	51
110	145	53
120	160	52
130	170	54
140	180	56
150	200	52
170	220	55
200	250	59

SLOT		
(mm)	(mm)	OPEN AREA %
3x25	8x30	30
4x25	9x30	36
5x25	10x30	40
6x25	12x31	38
7x25	13x31	41
8x25	15x32	39
9x25	16x32	41
10x25	17x34	42
12x25	21x34	38
14x25	23x34	36





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POLYURETHANE

Locker Group offer a selection of Polyurethane screens to suit your individual requirements.

Polyurethane is ideal for versatility, accuracy of product sizing and long life when screening fine to medium particles in wet or dry situations.

POLY CROSS TENSION

Provides high wear and corrosive resistance with a multitude of moulded tapered apertures.

POLY MODULAR

Poly Modular screen panels offer the benefits of polyurethane wear resistance and accurate screening in a light weight system designed to reduce maintenance and downtime.



POLY FLIP FLOP (FLEXTEC)

Wear resistant poly, high efficiency, non-blinding screen panel used in "Flip-Flop" type screen machines. Available in various widths, lengths and apertures.



PLATES

Locker Group plates provide increased life and plant capacity and will effectively reduce downtime and associated maintenance costs. There are 2 types of plates:

- 1. Profile- mainly out of quenched steel. i.e. BIS400, in a range of thicknesses, 6, 10 or 12mm. Typically used for scalping.
- Perf mainly out of mild steel plates in a range of thicknesses, 3, 4, 6mm. Typically used for sizing.

Locker Group offer a variety of plates in different aperture sizes, shapes and spacings enabling selection of the correct configuration to suit your particular application.

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Technical Data Sheets are available for further information.





WEDGE WIRE

Wedge Wire provides a unique combination of two of the important features required in many screening applications. Mechanical Strength because of the thickness of the screen in relation to the aperture and efficiency as the wedge wire shape ensures an uninterrupted flow of material, minimising the possibility of apertures blinding.



Because of the sharp screening edge, wedge wire is very efficient in dewatering applications.

Apertures offered can be as fine as 0.25 mm to larger than 6.0 mm.

Wedge Wire Screen panels are manufactured to order to suit many screen designs, including:





FULLY BANDED

*Frames may be manufactured to your specification





Technical Data Sheets are available for further information.

INSTALLATION OF A HOOKED EDGE SCREENCLOTH

SIDE TENSION

1. Check the Stringer Bars ensure they are straight and true.



- 2. Check that the Stringer Rubbers are firmly in place on the Stringer Bars.
- Clear away debris from the support ledges. з.



- Check you have the correct aperture. 4.
- Check that the screencloth length is equal to the length of the 5. clamping bar, and ensure clamping bars are straight and sound.



Install screencloth allowing equal clearance on both sides. 6.



7. Engage clamping bars securely into hooked edges taking care they clear any sheetmetal lip.





9.

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From the centre of screencloth install pre-greased tensioning bolts and tighten to ensure screencloth retains approx equal clearance on both sides. Locker Group recommend that tensioning be done simultaneously.



Run the screen for 1 hour, then recheck all tension bolts. The amount of retension will depend upon the particular specification but generally all screencloths will require retensioning as the wires bed into the precrimped forms.

END TENSION

- For installation of an End Tension hooked edge please follow same steps 1 to 3 & 9 (side tension) and follow:
- Check you have the correct aperture, screen length and overhook dimensions.
- 2. Check that the fixed end is straight and sound. Check that the banana bar is curved and sound (see below).



- 3. Install the screencloth with one hooked end over the fixed end (banana bar left out).
- 4. Slide banana bar into position at other end and secure into hooked edge taking care it clears any sheetmetal lip.
- Tension up screen by using mechanism evenly on either side of banana bar (ratchet or all thread).

HOW MUCH TENSION?

This factor will largely depend upon the aperture, wire diameter or width of screen. However, as a guide, satisfactory tension should be achieved on most standard cloths until approx 100 - 120mm. For fine mesh apertures and other fine specifications the general rule is drum tight.



* Hook bolts (J Bolts) can be used to reduce the screencloth movement relative to the support frame.







JOINING SCREENCLOTHS

For specifications 16.0mm aperture and/or 5.0mm diameter and finer. that require joining, we recommend a minimum of 25 mm underlap.

For correct installation ensure the hooked edges are the same length as the clamping bars and install the lower screencloth first, with the underlap facing against the direction of flow.

Note: Option 2 shows an overlap set up which can also be used.



DOUBLE CAMBER

For double camber screencloths install the centre hold down bar and tighten then simultaneously tighten each side of the clamping bars.



CENTRE HOLD DOWN BAR

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TROUBLE SHOOTING - SPLIT SCREENCLOTHS

The most common reported failure of screencloths is splitting. This may be generally attributed to the screencloth being allowed to whip (flap) thereby splitting. This usually occurs along the pivot point, commonly at the stringer bars.

Whipping the screencloth is created by lack of correct tensioning and may be caused by one or more of the following:

- 1. Lack of even tension
- Missing tension bolts 2.
- Single length clamping bar tensioning two or more screencloths 3.
- Screencloth too wide in overall hooked edge dimension 4.
- 5. Insufficient camber across the screencloth width
- Worn stringer rubbers 6.
- Stringer rails not true 7.
- Worn/bent clamping bars 8.
- Screencloth not retensioned following installation 9.
- Stringer rail support member cracked or damaged 10
- Insufficient stringer rails across the width of the screencloth 11.
- Screencloth too narrow 12.
- Overlapped screencloth incorrectly installed 13.
- 14. Tensioning bolt jammed on top of sheet metal hook
- Coil springs cracked/damaged 15.
- Single camber spanning 1525 mm or greater 16.
- End Tension only uneven tension banana bar has lost its curve 17.
- 18. End Tension only breaking wire regulary, add rubber strip between bar and inside of hook





PEGGING OF APERTURES

Pegging of screencloths (not to be confused with Blinding) is the presence of particles entering an aperture, but being too large to pass and sit in the aperture with approx 2/3rds the mass below the screencloth surface.



Issues to consider when experiencing pegging are:

- . Is the screencloth under-loaded?
- 2. Is the screencloth over-loaded and stratification is poor?
- Is the amplitude excessive? While it increases the ability to throw more material along the cloth, it may defeat stratification and screening efficiency.
- Have you considered reversing the flow of the vibrator from contra flow? This can have an effect on reducing pegging.
- Is the wire diameter is too large for the given type of particle shape?
- Is it possible to increase open area by choosing a smaller wire diameter, and/or selecting a slotted aperture specification.
- 7. Is there an excess of water jet pressure at the inflow end? This can cause a large number of fines to be screened and creates a fewer number on the discharge end, therefore causing the screencloth to peg due to lack of stratification in this area.

BLINDING OF APERTURES

Blinding of a screencloth can be described as the process where damp material, due to the surface moisture contents, clogs up the apertures.



Surface moisture is defined as the film of moisture adhering to the exposed surface of a given particle. Since the surface area of a given weight of fine material is as many times that of an equal weight of coarse lumps, it follows that fine material will carry much more surface moisture than coarse.

As the surface moisture of material increases from bone dry a point is reached where the individual particles begin to adhere to each other by the surface tension of the moisture film. Often when this point is reached the fine particles will adhere to the coarse particles resulting in poor screen efficiency.

As the surface moisture increases, another point is reached where damp particles will wet the screencloth surfaces, and blinding commences particularly in the corners where screencloth wires meet. No exact figure can be given where surface moisture content of material will cause blinding. The figure will vary depending upon the aperture size, the type and size of material being screened, the amount of clay or soil in the feed etc.

Blinding may be reduced or overcome by:

- (a) Using heated screencloths
- (b) Using a stainless steel specification
- (c) Using bouncing ball screencloth decks
- (d) Reducing the wire diameter size
- (e) Using Hi-Ton apertures or more successfully the longslot apertures with a greater percentage of open area







USING THE LOCKER GROUP STROKE INDICATOR

Locker Group stroke indicators are designed to assist the measure of a vibrating screen.

- Position above spring as shown in fig below Note: For linear motion orient indicator lines to be with the direction of motion
- 2. With machine in motion, measure the stroke by looking for

a) Non linear motion

2 circles side by side



not overlapping or with a gap



b) Linear motion

2 lines end on end



not overlapping or with a gap





Position of LSI (Same for

other side

of screen)





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ACCESSORIES



SPRAY NOZZLES

Spraying Greenhouse soil

· many other uses where

high intensity washing

and spraying is required.

Washing, sand,

gravel, coal, etc.

FEATURES/BENEFITS

- 7 sizes to choose from
- Economical
- Fan shaped curtain of water
- Abrasion resistant
- Corrosion resistant
- Even distribution
- · High washing intensity
- Self sealing thread

POLY NOZZLE SPRAY DATA

Colour	Wh Pl	ite 03	Gre Pl	een D5	BI PI	ue 07	Yel PI	low 09	R P	ed D11	Ta PD	n 13	Bla PD	ck 16
HEIGHT DVER DECK	1.5 BAR	2.5 BAR												
200mm	300	400	500	800	1000	1200	900	1100	900	1000	TBA	TBA	TBA	TBA
800mm	350	450	800	900	1100	1300	1100	1400	1200	1300	TBA	TBA	TBA	TBA
100mm	400	500	1050	1200	1200	1400	1300	1500	1400	1500	TBA	TBA	TBA	TBA



CAPPING RUBBER

Locker Group recommends the use of capping rubber to maximize screencloth life. It is important that worn capping rubbers are replaced immediately.

POUND TOP SHOPT I FG



	OF SHORT ELD					
CODE	COIL LENGTH	DIA A	DIA B	DIA C	DIA D	
SBCSB4	20M	8	12	26	30	
SBCSB7	20M	10	14	26	30	
SBCSB5	20M	12	14	27	30	



ROUND T	OP LONG LEG				
CODE	COIL LENGTH	DIA A	DIA B	DIA C	DIA D
SBCRT1	10M	8	15	50	30
SBCRT2	10M	10	15	50	30
SBCRT3 H	P 10M	12	21	56	30

FLAT TOP LONG LEG

CODE	COIL LENGTH	DIA A	DIA B	DIA C	DIA D
SBCFT1	10M	8	20	60	30
SBCFT1 HF	P 10M	10	25	65	30
SBCFT2	10M	12	20	60	30

*Capping rubber can also be supplied in polyurethane on request.

SIDE CLAMPING BAR

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STANDARD LENGTHS (Supplied with or without holes)

1220mm	1525mm	1830mm
(4'0'')	(5'0'')	(6'0'')

Side clamping bars are available in steel, rubber coated or poly coated.



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SIDE CLAMP HARDWARE

Locker Group supplies all types of side clamp hardware.





Wedge Type Clamp Bolt

(straight or curved wedge)

THICK (MM)

6



Bolt Type Clamp

Spring Type Clamp Bolt

WIDTH (MM)

100

SKIRTING RUBBER

Locker Group offers 2 types of skirting rubber in a variety of thicknesses. Most commonly available in 30m rolls.

1) Soft (longer life) 2) Hard



-	
6	150
6	200
6	250
6	300
10	100
10	150
10	200
10	250
10	300
40	100
12	100
12	150
12	200
12	250
12	300
16	100
16	150
16	200
16	250
16	300
20	100
20	150
20	200
20	250
20	300

WEDGETYPE CLAMP BOLTS

A wedge system used to tension the clamping bars securing the screencloth replaces the bolts and nuts mostly in use now.

With a wedge system the bottom deck screen cloth can be replaced in about ten minutes instead of two hours. It is easy to drive the wedge into the "tight" position. We offer two wedge shapes:

- 1. "Straight" as shown
- 2. "Curved" allowing greater access to wedge head.

The tension can be checked with the screen running.

Ideal where access to screen is difficult.







CORROCERAMIC WEARLINERS

The excellent high wear resistance of alumina-silica ceramics combined with energy absorbing rubber, (moulded) onto a steel backing plate. Superior performance to many steel grades.



RUBBER WEARLINERS

Locker Group wearliners are designed to reduce impact on supporting structures and reduce maintenance and downtime on equipment. It also increase the wear life of plant and machinery whilst reducing noise.



HOW TO ORDER SCREENCLOTHS

Please provide the following information:

- 1. Number required
- 2. Aperture required
- 3. Diameter of wire
- 4. Material
- 5. Length of screencloth
- 6. Width over hooks or flat
- 7. Hook type
- 8. Hook orientation

AND IF REQUIRED

- 9. Special hooks
- 10. Centre holes for Double Camber
- 11. Direction for rectangular aperture dimensions
- 12. Rolling dimensions for Trommel screens
- 13. Stringer rubber length x type
- 14. Clamping bars qty x length
- 15. Spray nozzles qty x size





SCI	REEN	СССТН	DIME	ENSIO	NS: in		netres	to n	earest	5mm)						
FEET							Z	ICHES								
	•	1/2	4	2,	"	.4	ŝ	.9		. 0	.6	3/8	10"	10 1/2	11"	11/2"
		12.7	25.4	50.8	76.2	101.6	127	152.4	177.8	203.2	228.6	238.1	254	266.7	279.4	292.1
-	305	320	330	355	380	405	430	460	485	510	535	545	560	570	585	595
N	610	620	635	660	685	710	735	760	780	815	840	850	865	875	890	006
m	915	925	940	965	066	1015	1040	1065	1090	1120	1145	1150	1170	1180	1195	1205
4	1220	1230	1245	1270	1295	1320	1345	1370	1400	1420	1450	1455	1475	1485	1500	1510
ß	1525	1535	1550	1575	1600	1625	1650	1675	1700	1725	1755	1760	1775	1790	1805	1815
v	1830	1840	1855	1880	1905	1930	1955	1980	2005	2030	2055	2065	2085	2095	2110	2120
2	2135	2145	2160	2185	2210	2235	2260	2285	2310	2335	2360	2370	2390	2400	2415	2425
80	2440	2450	2465	2490	2515	2540	2565	2590	2615	2640	2665	2675	2695	2705	2720	2730
σ	2745	2755	2770	2795	2820	2845	2870	2895	2920	2945	2970	2980	2995	3010	3025	3035
₽	3050	3060	3075	3100	3125	3150	3175	3200	3225	3250	3275	3285	3300	3315	3325	3340
Ħ	3355	3365	3375	3405	3430	3455	3480	3505	3530	3555	3580	3590	3605	3620	3630	3645
12	3660	3670	3685	3710	3735	3760	3785	3810	3835	3860	3885	3895	3910	3925	3935	3950

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HANDY METR	IC CONVERSION TA	BLES		
A x X = B	B x Y = A	B x Y = A		
_	_			
A	В	X	Ŷ	
Inches	Millimeteres	25.4	0.39	
Feet	Metres	0.304	3.281	
Miles	Kilometres	1.609	0.621	
Sq inches	Sq mm	645.16	0.0015	
Sq feet	Sq metres	0.093	10.764	
Cu. inches	Cu. cms	16.387	0.061	
Cu. feet	Cu. metres	0.28	35.315	
Ft/second	Km/hour	1.097	0.911	
Pounds	Kg	0.453	2.204	
Tons	Tonnes	1.016	0.984	
Lbs/ft	Kg/m	1.488	0.672	
Lbs/sq. in.	kg/sq. cm	0.070	14.223	
T.P.S.I	kg/sq mm	1.575	0.635	
Pints	Litres	0.568	1.76	
Gallons	Litres	5.546	0.22	

Please note in this Screencloth booklet, we have only specified a small overview of our range Locker Group offers an extensive selection of materials for your requirements. Speak to your Locker Group consultant for further information.

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