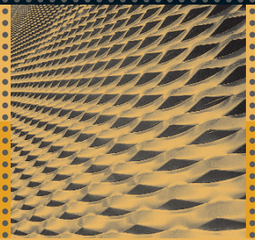
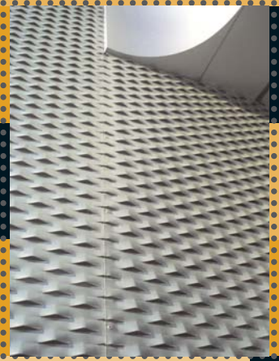
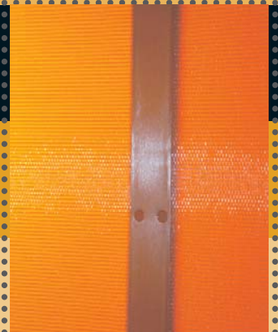



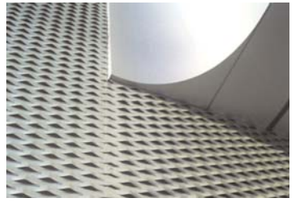




Introduction

This section is to help you with your choices when specifying the finishes and methods of fixing the many different materials contained within this book. As this is a general overview, please note that not all products are suited to all finishes. For instance, the perforated materials with very small holes are ill-suited to powder coating owing to clogging but are well suited to a polished finish. If you have any questions please do not hesitate to contact us for advice.

We have also supplied a number of conversion tables that we hope you will find useful.

Fixing Examples


Face fixed Ambasciata.


Perftec® with panel holder.


Sambesi with clamping frame.

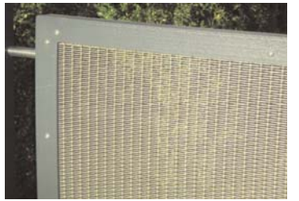

Lago with roundbar and eyebolts.


Face fixed Welltec®.


Coltec® shadow joint.


Meshtec® balustrade with box frame.


Baltic mesh with bent rods and inside clamping.


Meera with angle and clamping flat

Fixing Details

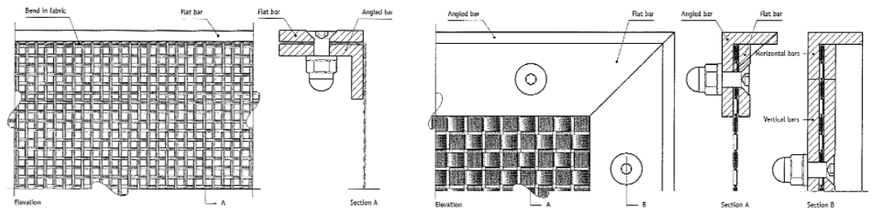
These drawings are for reference use only and are not to scale. All hardware and attachments must be sized based upon your project requirements.

Frame with Bent Fabric

Typically used for the flexible meshes where the cables are oriented in a horizontal direction. The rods of the fabric are bent to form a right angle and fixed using an angle and clamping flat. Found in applications such as column claddings and projects where width is more important than height.

Frame

This rigid frame requires attachment to a substructure. The metal fabric is clamped tight by bolts into a frame made of steel angles and flats, various flat and angle dimensions can be considered. The mesh is not tensioned in this construction so to ensure flatness the panel size must be considered. Meshes can also be welded to frames.



Flat and Angle with Threaded Rod

Both ends of the fabric are held using angles and clamping flats with a threaded rod welded to the angle for tensioning by turnbuckles or nuts.

Flats with Flat Eye

Both ends of the fabric are clamped using flat bars, with flat eyes bolted between the flats for tensioning with turnbuckles or nuts.

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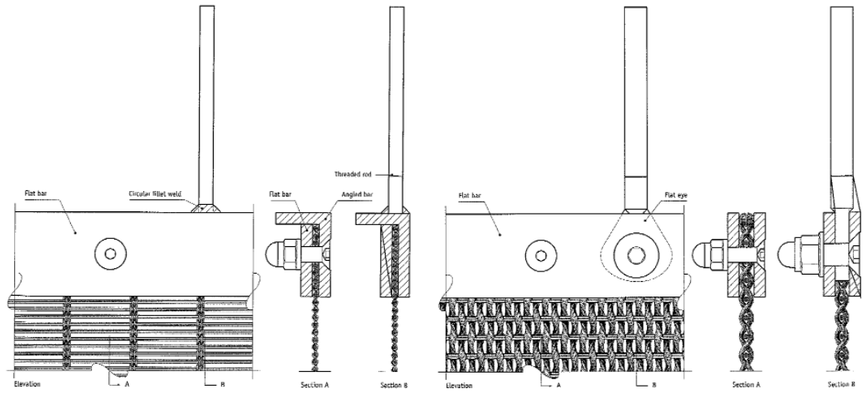
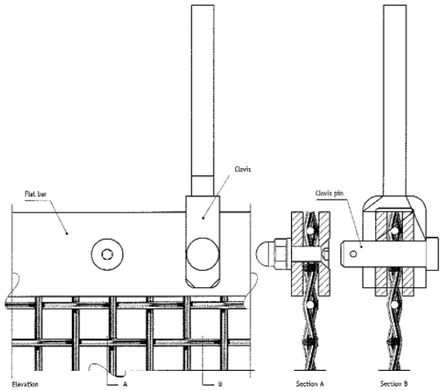


Fixing Details

These drawings are for reference use only and are not to scale. All hardware and attachments must be sized based upon your project requirements.

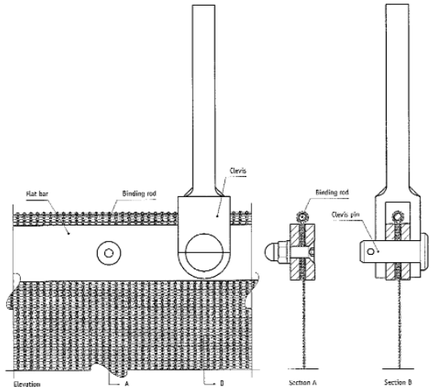
Flats with Clevis

Both ends of the fabric are clamped using flat bars. Clevises with threaded rods are added for tensioning with turnbuckles or nuts.



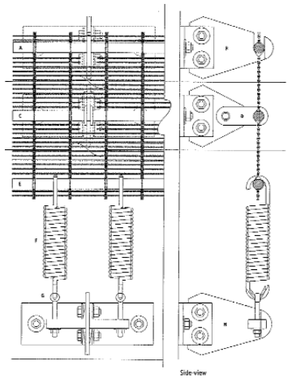
Flats with Clevis and Binding Rod

The fabric is folded over a binding rod and clamped using flat bars at each end of the panel. Clevises with threaded rods are added for tensioning with turnbuckles or nuts. This is used only for fine meshes.



Woven in Bar with Springs

This system was developed specifically for parking structures and large facades where tension loads require consideration. The weft wires are removed from the top, bottom and intermediate locations and replaced with larger round bars. The top round bar is held by triangular brackets, the intermediate round bars are connected to pivoting brackets for lateral support. Springs attach to the bottom bar in order to apply the correct pre-tension to the fabric and to reduce the tension force on the structure. Eyebolts are attached to the springs to allow maximum adjustability.



Woven in Bar with Eyebolt

The weft wires are removed from the top and bottom of the panels and replaced with a larger round bar. Threaded eyebolts are attached to the round bar for tensioning with turnbuckles or nuts. The size of the round bar and frequency of the eyebolts is determined by tension load.

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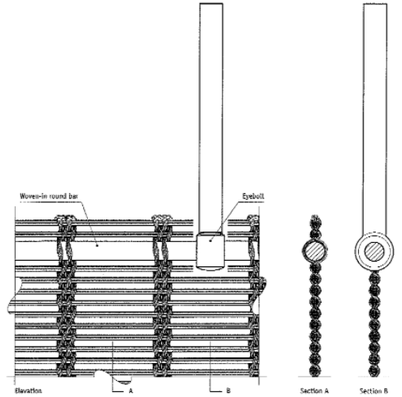
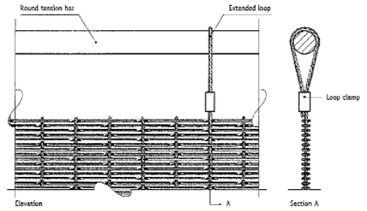


Fixing Details

These drawings are for reference use only and are not to scale. All hardware and attachments must be sized based upon your project requirements.

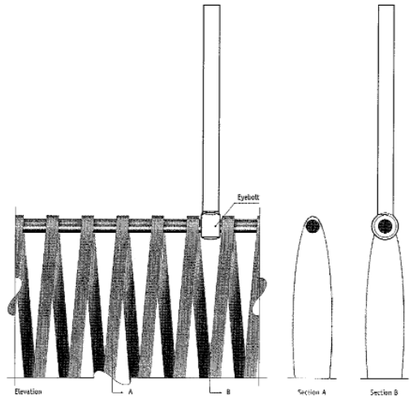
Extended Loop

Cables extend beyond the fabric edge, are then looped and secured with a loop clamp, a round tensioning bar is then threaded through the loops. The frequency of the loops depends upon the tension load, and the loop diameter depends upon the diameter of the tensioning bar.



Eyebolt

Specific to Escale, an eyebolt is attached to the cross rod of the mesh and is tensioned by a turn-buckle or nut. The eyebolt can be substituted with a hook.



Mesh Fixings

Product	Frame	Frame with Bent Fabric	Flat and Angle Threaded Rod	Flats with Flat Eye	Flats with Clevis	Flats, Clevis and Binding Rod	Woven-in Bars with springs	Woven-in Bars with Eyebolts	Extended Loop	Eyebolt
Baltic	•	•	•	•	•					
Delphin	•	•	•			•				
Escale 7 x 1							•			•
Futura 240	•	•	•	•	•		•	•	•	
Futura 3110	•	•	•	•	•		•	•	•	
Lago	•	•	•		•		•	•	•	
Lamelle	•	•	•		•		•	•	•	
Ocean	•	•	•	•	•					
Omega 1500	•	•	•	•	•		•	•	•	
Omega 1510	•	•	•	•	•		•	•	•	
Omega 1520	•	•	•	•	•		•	•	•	
Omega 1530	•	•	•	•	•		•	•	•	
Omega 1550	•	•	•	•	•		•	•	•	
Sambesi	•	•	•	•	•		•	•	•	
Luna	•	•	•			•				
Tigris	•	•	•	•	•		•	•	•	
Kiwi	•	•	•			•				
Mandarin	•	•	•			•				
Jorvik	•	•	•		•					
Ransome	•	•	•		•					
Mach	•	•	•		•					
Sumava	•	•	•		•					
Dufir	•	•	•		•					
Trebon	•	•	•		•					
Remek (NO)	•	•	•		•					
Remek (E2)	•	•	•		•					
Meera	•	•	•		•					
Chara	•	•	•		•					
Lyra Grande	•	•	•		•					
Lyra	•	•	•		•					
Ekarma	•	•	•		•					
Moroa	•	•	•		•					
Manuk	•	•	•		•					
Topeka	•	•	•		•					
Pico	•	•	•		•					
Chingo	•	•	•		•					
Lacuna	•	•	•		•					
Axial	•	•	•		•					

Finishing Techniques

Polyester Powder Coating

Polyester powder coating (PPC) has become one of the favoured finishes for metal structures in architecture.

Using an electrostatic fusion process, where powder particles are attracted to the item and "fused" on to the metal by heat, PPC offers a durable finish to both aluminium and mild steel.

Cadisch offers Polyester coating in any RAL or BS colour including metallic colours. We guarantee a minimum coverage of 50 microns and are able to offer substantial warranties for many conditions.

Satin and Bright Polishing

Available on most Stainless and Aluminium items, Cadisch are able to offer a variety of polished finishes to compliment the architectural environment. Using abrasive, non-ferrous belts Satin finish ranges from 180 (coarse) grit to 500 grit (super mirror on Stainless Steel).

Nylon Coating

Whilst Polyester coating is an ideal option for most applications, Nylon coating offers more in terms of durability and abrasion resistance.

Again available in virtually all RAL or BS colours. Nylon coating offers a surface coverage of up to 150 microns as opposed to PPC's average of 50 – 80 microns.

The inherent flexibility of Nylon makes it particularly resistant to flaking or chipping and graffiti or marking can be removed with a simple solvent. Again, substantial guarantees are available with Nylon coatings upon request.

Electro Polishing

Whilst abrasive finishes such as Satin Polishing are commonly applied to Stainless Steel, in some instances Electro-Polishing can be more appropriate for example, when the surface of the material is particularly complex e.g. Welded or Woven Stainless Steel Mesh.

Electro polishing relies upon anodic reduction of the material surface to give a uniform lustre.

Placing the item to be polished in an electrolyte bath, an electrical current removes the surface of the Stainless Steel in very small amounts thus producing an even, grain free finish.

Anodising

An extremely durable weather proof yet finely detailed finish, which has dominated architectural Aluminium for many years.

Anodising is an electrolytical process which relies upon the thickening of the oxide film on the Aluminium surface to provide an attractive, hard wearing and stable satin / matt surface for almost any Aluminium section.

When specifying an anodised finish it is imperative to select a grade of Aluminium that is suitable for architectural anodising.

Cadisch Finishing Options

Finish	Aluminium	Stainless Steel	Mild Steel	Yellow Metals
Polyester	•		•	
Nylon	•		•	
Anodised	•			
Electro Polished	•	•		
Satin Polished	•	•		•
Bright Polished		•		•
Galvanised			•	

Weight of Metric Stainless Steel Standard Sheets

		Weight per sheet (kg)		
Thickness (mm)	Kgs/sq.m	2m x 1m	2.5m x 1.25m	3m x 1.5m
0.4	3.40	6.8	10.6	15.3
0.5	4.25	8.5	13.3	19.1
0.6	5.10	10.2	15.9	22.9
0.7	5.95	11.9	18.6	26.8
0.8	6.80	13.6	21.2	30.6
0.9	7.65	15.3	23.9	34.4
1.0	8.50	17.0	26.6	38.2
1.2	10.20	20.4	31.9	45.9
1.5	12.75	25.5	39.8	57.4
2.0	17.00	34.0	53.1	76.5
2.5	21.25	42.5	66.4	95.6

Weight of Metric Stainless Steel Standard Plates

		Weight per sheet (kg)		
Thickness (mm)	Kgs/sq.m	2m x 1m	2.5m x 1.25m	3m x 1.5m
3.0	26	52	81	117
4.0	34	68	106	153
5.0	43	86	134	193
6.0	51	102	159	229
8.0	68	136	212	306
10.0	85	170	265	382
12.0	102	204	318	459
15.0	127	254	397	571
20.0	170	340	531	765
25.0	212	424	662	954
30.0	255	510	797	1147
40.0	340	680	1062	1530
50.0	425	850	1228	1912

Gauges of Imperial Stainless Steel Standard Sheets

Thickness
8swg 4.06mm
10swg 3.25mm
.118” 3.0mm
12swg 2.64mm
.099” 2.5mm
14swg 2.03mm
16swg 1.63mm
.059” 1.5mm
18swg 1.22mm
19swg 1.02mm
20swg 0.91mm
21swg 0.81mm
22swg 0.71mm
24swg 0.56mm
26swg 0.46mm

Aluminium Standard Sheet

Size (mm)	Weight per sheet (kg)	Size (mm)	Weight per sheet (kg)
2000 x 1000 x 0.5	18.3	2500 x 1250 x 1.5	12.7
2500 x 1250 x 0.5	10.8	3000 x 1250 x 1.5	15.2
2000 x 1000 x 0.6	16.9	3000 x 1500 x 1.5	18.3
2500 x 1250 x 0.6	5.08	2000 x 1000 x 2.0	10.8
2000 x 1000 x 0.8	4.34	2500 x 1250 x 2.0	16.9
2500 x 1250 x 0.8	6.78	3000 x 1000 x 2.0	16.3
2000 x 1000 x 1.0	5.42	3000 x 1250 x 2.0	20.3
2500 x 1250 x 1.0	8.47	3000 x 1500 x 2.0	24.4
3000 x 1250 x 1.0	10.2	2000 x 1000 x 2.5	13.6
2000 x 1000 x 1.2	6.50	2500 x 1250 x 2.5	21.2
2500 x 1250 x 1.2	10.2	3000 x 1500 x 2.5	30.5
3000 x 1250 x 1.2	12.2	2000 x 1000 x 3.0	16.3
3000 x 1500 x 1.2	14.6	2500 x 1250 x 3.0	25.4
2000 x 1000 x 1.5	8.13	3000 x 1000 x 3.0	24.4
2500 x 1250 x 1.5	12.7	3000 x 1250 x 3.0	30.5
3000 x 1250 x 1.5	15.2	3000 x 1500 x 3.0	36.6
2000 x 1000 x 1.5	8.13	4000 x 2000 x 3.0	65.0

Length

To convert from	to	multiply by
in	mm	25.4
mm	in	0.394
ft	mm	304.8
mm	ft	0.00328
yd	mm	914.4
mm	yd	0.00109

Volume

To convert from	to	multiply by
in^3	mm^3	16387.1
mm^3	in^3	0.000061
in^3	cm^3	16.387
cm^3	in^3	0.06102
in^3	1(litre)	0.01639
ft^3	m^3	0.02832
m^3	ft^3	35.31
ft^3	1(litre)	28.316
gallon	1(litre)	4.546

Mass

To convert from	to	multiply by
lb	kg	0.45359
kg	lb	2.2046
ton (UK)	kg	1016.05
kg	ton (UK)	0.00098
tonne	kg	1000

Force

To convert from	to	multiply by
lbf	N	4.448
N	lbf	0.224
tonf	kN	9.964
kN	tonf	0.1004
kgf	N	9.806

Area

To convert from	to	multiply by
in^2	mm^2	645.16
mm^2	in^2	0.00155
in^2	cm^2	6.4516
cm^2	in^2	0.1550
ft^2	m^2	0.0929
m^2	ft^2	10.764

Relative Density

To convert from	to	multiply by
lb/in^3	kg/m^3	27679.9
kg/m^3	lb/m^3	0.000036
lb/in^3ft	g/cm^3	0.0361

Mass Per Unit Length

To convert from	to	multiply by
lb/ft	kg/m	1.488
kg/m	lb/ft	0.672

Mass Per Unit Area

To convert from	to	multiply by
lb/ft^2	kg/m^2	4.882
kg/m^2	lb/ft^2	0.2048

Stress or Pressure (N/mm^2 = MPa)

To convert from	to	multiply by
lbf/in^2	N/mm^2	0.006894
N/mm^2	lbf/in^2	145.05
ksi	N/mm^2	6.894
N/mm^2	ksi	0.145
$tonf/in^2$	N/mm^2	15.4441
N/mm^2	$tonf/in^2$	0.0647
lbf/in^2	kgf/mm2	0.000703
kgf/mm^2	lbf/in^2	1422.47
kgf/mm^2	N/mm^2	9.806
bar	N/mm^2	0.1
bar	lbf/in^2	14.504

Useful Formulae and Values

Circumference of a Circle
3.1416 x Diameter

Area of a Circle
3.1416 x $Radius^2$

Area of Sphere
Area of its greatest circle x 4'
or square of diameter x 3.1416

Area of Hexagon
Square of diameter
of inscribed circle x 0.866

Area of Triangle
Half the base x height

Volume of Cylinder
Area of the base x height

Volume of Sphere
Cube of the diameter x 0.5236

How to Find us

By Car: Our Head Office is located in Unit 1 of the Finchley Industrial Centre, which is on the Finchley High Road. This is within easy reach of the London North Circular ring road from central London, and is close to the M25 (Junction 23) and A1 (Junction 1).

By Tube: The nearest tube station is Woodside Park, on the Northern Line, which is in Zone 4.

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