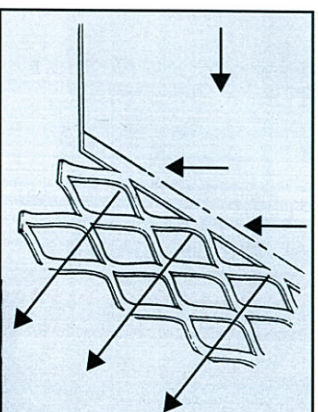


Expanded Metallic Products For Building And Commercial Applications

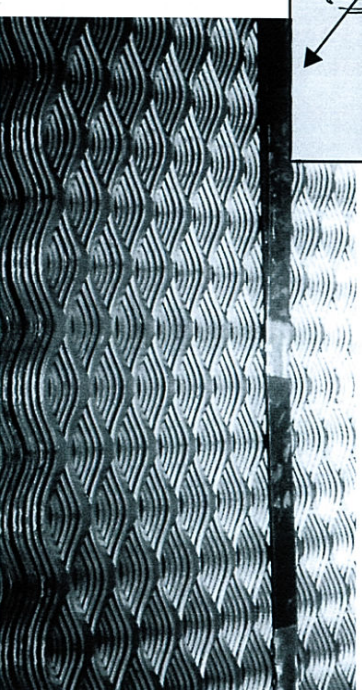
- ◆ Expanded Metals
- ◆ Perforated Metals
- ◆ Plaster Beads & Laths
- ◆ Woven Wire Cloth
- ◆ Brick & Frame Ties
- ◆ High Security Mesh
- ◆ High Ribbed Mesh Formwork
- ◆ Steel Lintels
- ◆ Steel Plates & Channels

EXPANDED METALLIC

Expanded Metals

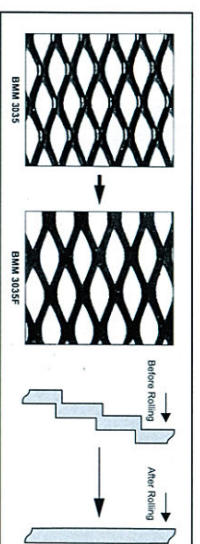


Expanded metals is produced from one continuous sheet of metal by expansion process i.e. slit and stretched to form uniform diamond-patterned meshes. This unique process results in double bonds formation where the rows of strands converge at the apex of each diamond, technically called "knuckles".



MATERIALS TYPE

1. Steel: Manufactured using high quality, low carbon steel complying to JIS G3131 (BS 1499) SPHC. Normally hot-dipped galvanised (to BS 729:19710 for anti-corrosion).
2. Stainless Steel: Manufactured using SS304/316 grade for highly corrosive environment applications.
3. Aluminium: Manufactured using high quality commercial grade aluminium sheets (Grade AA1100-H14) 99% pure aluminium.
4. Powder-Coated: All expanded steel meshes can be powder-coated for decorative and chemical resistant applications. A wide range of colour selection is available upon request.



Conventional / Flattened Meshes

1. Conventional mesh in which the strands are inclined from the plane of the steel sheet.
2. Flattened mesh in which the strands are in the same plane as metal sheet by press-rolled.

Expanded Metals

Product Specifications

Expanded metals is specified first with SWM (Short Way of Mesh) followed by LWM (Long Way of Mesh). The reference number is expressed in four or five digits. The first two digits indicate the thickness of metal and the remaining digits denote strand width. In both cases, the digits are multiplied by 0.1 factor to arrive at the actual dimension in millimetres.

Example: Ref No BMM 3060

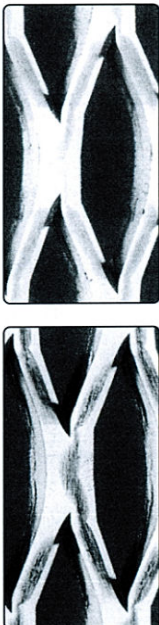
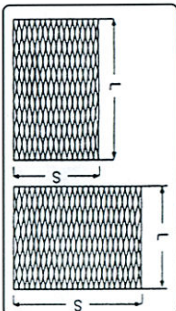
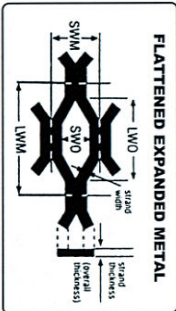
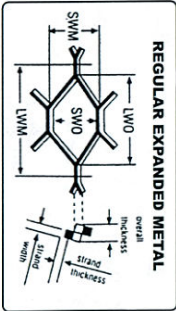
Mesh opening	=	42mm (SWM) x 115mm (LWM)
Thickness	=	30 x 0.1 = 3mm
Thickness	=	60 x 0.1 = 6mm

Note: The LWM can be precise whilst the SWM dimension and strand width is approximate subject to some tolerance. (± 10 percent) due to manufacturing constraints.

Expanded Metals And its Properties

The unique feature of expanded metals is that the mesh is formed from the same piece of metal. The "knuckles" where the strand joints create some inherent properties of expanded metals:

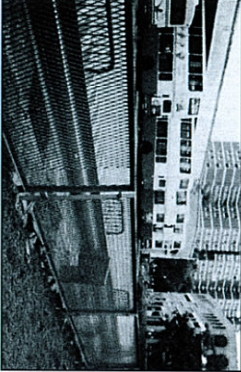
1. The intact "knuckles" provides structural support for loading, suitable for withstanding stress and support weight better than joining or welding process. As there are no joints or welds, it distributes loads evenly over wider area.
2. The open mesh design allows passage of light, air and sound; used for screenmesh, ventilation and security screen in many industrial buildings.
3. Lighter in weight yet stronger than steel sheet, thus economical applications for walkway platform, security fencing, machine guards, racking, etc.
4. Expanded mesh does not fray or unravel when cut or left unframed; ensures high degree of security and protection for security prisons, military installation, bank vaults and high-security fencing.
5. The anti-skid surface provides safety and grip suitable for stairreads, rugged maintenance floor, gratings and catwalks for factories, shipyards and oil refineries.



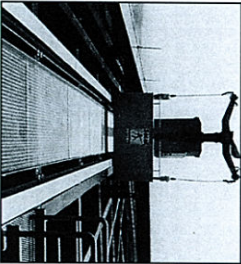
Expanded Metals

COMMERCIAL APPLICATIONS

Expanded metals is used in virtually all sectors of the industry-buildings, engineering works, oil refineries, shipyards, process industries and many others. Expanded metals can be functionally or decoratively in applications. Commercial applications include walkway, screening, safety guards, security installations, decorative racks, suspended ceiling, pedestrian barrier, grilles, balustrades, etc.



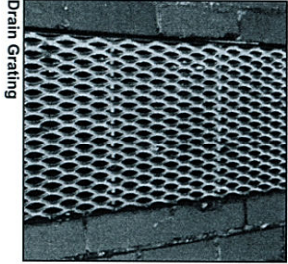
Pedestrian Barricades



Gondola Track



Decorative Ceiling Mesh



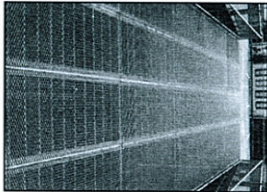
Drain Grating



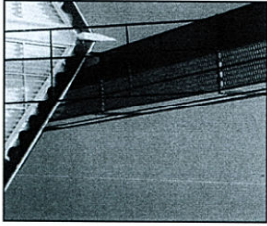
Fencing Mesh



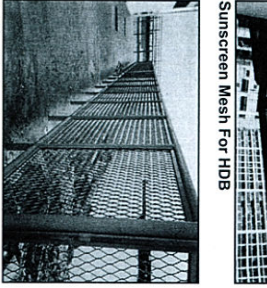
Protective Guard



Walkway Mesh



Catwalk



Safety Barricades



Sunscreen Mesh For HDB

Expanded Metals

EXPANDED METALS: Specifications

Category	Mesh Reference	Material Type	Mesh SWM (mm)	Opening LWM (mm)	Thickness (mm)	Strand (mm)	Weight $\pm 10\%$ (kg/m ²)	Standard LWM (mm)	Sheet SWM (mm)
Fine Meshes	BFM 1015	Steel	9	29	1.0	1.5	2.69	1220	2440
	BFM 2015	Steel	9	29	2.0	1.5	5.50	1220	2440
	BFM 1020	Steel	16	38	1.0	2.0	2.00	1220	2440
	BFM 1520	Steel	16	38	1.5	2.0	3.15	1220	2440
	BFM 1528	Steel	22	57	1.5	2.8	3.06	1220	2440
	BFM 2028	Steel	22	57	2.0	2.8	3.90	1220	2440
	BFM 2020	Steel	32	38	2.0	2.0	2.00	1220	2440
	BFM 2030	Steel	35	76	2.0	3.0	2.65	1220	2440
Medium Meshes	BMM 3035	Steel	22	57	3.0	3.5	7.30	1220	2440
	BMM 3045	Steel	35	76	3.0	4.5	6.60	1220	2440
	BMM 3060	Steel	42	115	3.0	6.0	8.00	1220	2440
	BMM 3030	Steel	50	152	3.0	3.0	2.83	1220	2440
	BMM 3050	Steel	50	152	3.0	5.0	4.71	1220	2440
	BMM 5050	Steel	50	152	5.0	5.0	7.05	1220	2440
	BMM 3075	Steel	75	200	3.0	7.5	5.20	1220	2440
Ballustrade Meshes	BBM 3032	Steel	25	40/81	3.0	3.2	6.05	1220	2440
	BBM 3032A	Aluminium	25	40/81	3.0	3.2	2.09	1220	2440
	BMM 3033	Steel	30	50/110	3.0	3.3	5.90	1220	2440
Walkway Meshes	BWK 30080	Steel	30	75	3.0	8.0	12.55	1220	2440
	BWK 45050	Steel	34	76	4.5	5.0	11.11	1220	2440
	BWK 50075	Steel	25	75	5.0	7.5	23.50	1220	2440
	BWK 50080	Steel	42	135	5.0	8.0	14.95	1220	2440
	BWK 50105	Steel	30	75	5.0	10.5	27.50	1220	2440
	BWK 50110	Steel	45	135	5.0	11.0	19.50	1220	2440
Louvre Meshes	BLM 1063	Steel	16	76	1.0	6.3	7.49	1220	2440
	BLM 1563	Steel	16	76	1.5	6.3	10.40	1220	2440

* Specification normally refers to steel but can be manufactured in aluminium and stainless steel.

* Sheet tolerance: SWM \pm 20mm

* SWM = Short Way of Mesh

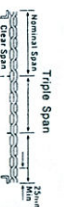
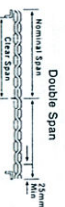
Notation: LWM = Long Way of Mesh

A = Aluminium

F = Flattened

STEEL WALKWAY MESHES: Load / Span Table

Walkway Mesh Reference	Types Of Loads	Simple Span (mm)			Double Span (mm)			Triple Span (mm)			
		600	900	1200	300	400	600	200	300	400	
BWK 50075	Uniform Load (kN/m ²)	5.80	2.50	1.50	23.80	10.70	6.10	51.00	25.40	14.60	
BWK 5010A	Point Load (kN)	1.30	0.85	0.64	2.95	1.97	1.50	4.55	3.18	2.42	
BWK 50105	Uniform Load (kN/m ²)	8.20	3.66	2.02	33.80	15.30	8.66	70.00	36.10	20.50	
BWK 50075A	Point Load (kN)	1.80	1.22	0.92	4.20	2.80	2.12	6.40	4.56	3.45	
BWK 50080	Uniform Load (kN/m ²)	4.90	2.25	1.22	20.00	9.00	5.21	43.85	21.40	12.14	
BWK 50075A	Point Load (kN)	1.10	0.74	0.54	2.50	1.68	1.27	4.00	2.68	2.04	
BWK 50110	Uniform Load (kN/m ²)	6.43	2.90	1.73	26.73	11.93	6.83	56.00	28.75	16.12	
	Point Load (kN)	1.44	0.96	0.72	3.30	2.22	1.68	5.06	3.56	2.70	
BWK 30080	Uniform Load (kN/m ²)	Not Recommended									
BWK 45050	Point Load (kN)	Not Recommended									



NOTE:
1) Load capacities given in the table are lowest loads that will cause no permanent deformation with safety factor of 1.4 times. If some permanent deformation is allowed, loads can be increased by 40%.
2) The load table is applicable based on spanning in uniform and non-uniform loads.
3) Spacing recommended based on assumption that deflection is not greater than span /200.
4) Spacing stated in table are nominal. Clear spans are obtained by deducting 25mm landing on both ends.

Expanded Metals

Micro Mesh: Specifications

Micro meshes are reduced version of expanded metals, manufactured under the same process using fine metal blanks (aluminium, stainless, galvanised sheet, titanium etc). It inherits all the properties of expanded metals but is used for light industries. Commercial usage includes screen, parabolic mesh, speaker grilles, air & oil filters, decorative screen and many others.

Micro Mesh: Specifications

Micro meshes are reduced version of expanded metals, manufactured under the same process using fine metal blanks (aluminium, stainless, galvanised sheet, titanium etc). It inherits all the properties of expanded metals but is used for light industries. Commercial usage includes screen, parabolic mesh, speaker grilles, air & oil filters, decorative screen and many others.

A close-up photograph of a fine, square-patterned expanded metal mesh, labeled MEM 0408 (Actual).

MEM 0408 (Actual)

A close-up photograph of a fine, square-patterned expanded metal mesh, labeled MEM 0305 (Actual).

MEM 0305 (Actual)

A close-up photograph of a fine, square-patterned expanded metal mesh, labeled MEM 0102 (Actual).

Micro Mesh Reference	Mesh Size		Strand Size (mm)	
	SWD	LWD	T	W
MEM 0102	1	2	0.3-0.4	0.3-0.4
MEM 0203	2	3	0.3-0.6	0.4-0.6
MEM 0305	3	5	0.4-0.6	0.4-0.8
MEM 0408	4	8	0.4-0.8	0.6-1.2
MEM 0510	5	10	0.4-0.8	0.6-1.8
MEM 0610	6	10	0.4-0.8	0.6-1.8
MEM 0612	6	12	0.4-1.0	0.6-1.8
MEM 0714	7	14	0.4-1.0	0.6-2.0
MEM 0820	8	20	0.4-1.0	0.6-1.8

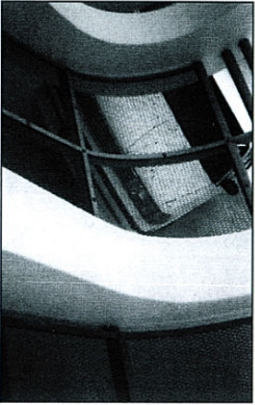
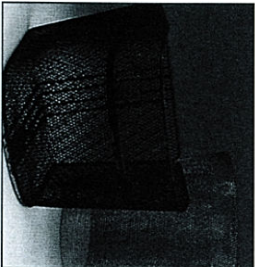
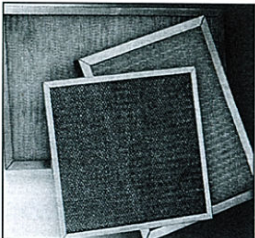
A close-up photograph of a coarse, diamond-patterned expanded metal mesh, labeled MEM 0820 (Actual).

MEM 0820 (Actual)

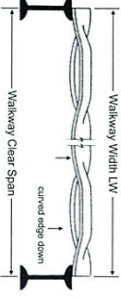
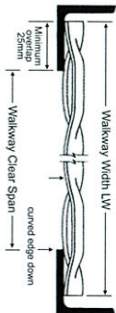
A close-up photograph of a coarse, diamond-patterned expanded metal mesh, labeled MEM 0612 (Actual).

MEM 0612 (Actual)

A close-up photograph of a coarse, diamond-patterned expanded metal mesh, labeled MEM 0510 (Actual).



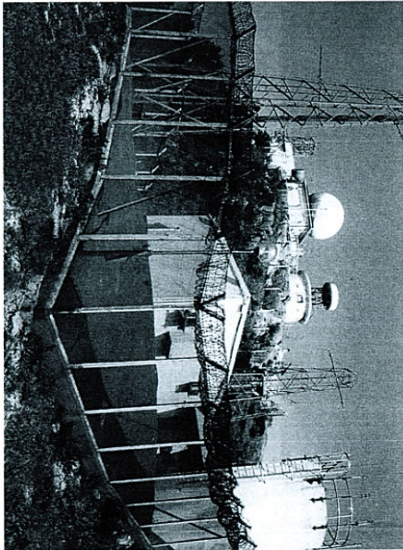
Fixing and Installation: Walkway Meshes
When fixing the side of Expanded Metal and welded in situ to the steel beam or shape supporting structure, weld the side as shown. But according to application conditions, welding spots may be every 2 meshes or 4 meshes. However, it is recommended for safety to weld every mesh for such applications where traffics are busy or where are likely subject to heavy shocks and vibrations.



High Security Fencing

Manufacture

high security fencing panels are produced by expanding ie shear and stretch steel/stainless steel sheet to meshes. In this operation, double bonds are created where row of strands converge at the apex of each diamond.



The process gives expanded metal security fencing the following advantages:

1. The jointless structure of expanded mesh fencing has high strength and impact resistance.
2. Difficult to cut and penetrate, thus makes illegal intrusion impossible.
3. The small mesh opening and vertical placement of the diamond apertures make climbing difficult as there is no effective foothold.
4. The sharp and razor edges of expanded meshes makes handhold difficult and painful, thus provides antiscaling.
5. For extra high security, we have a wide range of stainless steel barbed tape obstacles, to be installed on top of the security fencing.

High Security Fencing

Applications

For areas designated for high performance security fence eg. prison, hydro-dams, nuclear power plants, military camps, embassies, airports, oil refineries & others like anti-terror deterrent facilities.

Installation

Can be easily installed to existing or new fencing posts. We also have our own weldless fencing posts complete with whole system (upon request).



- Stainless steel barbed tape obstacles will normally be installed on top of the fencing mesh for high security reason.
- We have a wide range of stainless steel barbed tape obstacles that are dependable, effective and the best choice of security.
- Bestial high security expanded metal fencing can be manufactured using mild steel c/w hot-dipped galvanising &/or stainless steel.

High Security Fencing

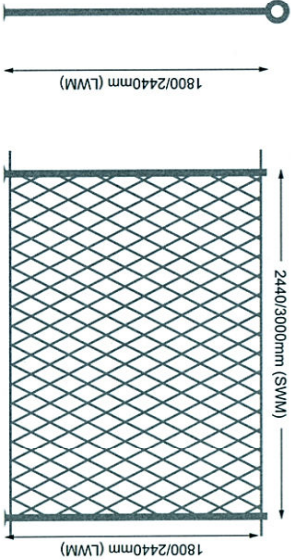
EXPANDED SECURITY FENCING: Specifications

Category	Mesh Reference	Material Type	Mesh Opening SWM x LWM (mm)	Thickness (mm)	Strand (mm)	Panel Size LWM x SWM (mm)
High Security Fencing Mesh	SFM3233	Hot-dipped Galvanised Steel	42 115	3.2	3.3	1800/2440 x 2440/3000
	SFM3260	Hot-dipped Galvanised Steel	42 115	3.2	6.0	1800/2440 x 2440/3000
	SFM3235	Hot-dipped Galvanised Steel	50 152	3.2	3.5	1800/2440 x 2440/3000
	SFM4545	Hot-dipped Galvanised Steel	50 152	4.5	4.5	1800/2440 x 2440/3000
High Security Fencing Mesh	SFM3240	Hot-dipped Galvanised Steel	75 200	3.2	4.0	1800/2440 x 2440/3000
	SFM4555	Hot-dipped Galvanised Steel	75 200	4.5	5.5	1800/2440 x 2440/3000
	SFM2030	Hot-dipped Galvanised Steel	15 75	2.0	3.0	1800/2440 x 2440/3000
High Security Fencing Mesh	SFM3030	Hot-dipped Galvanised Steel	15 75	3.0	3.0	1800/2440 x 2440/3000
	SFM3030	Stainless steel	15 75	3.0	3.0	1800/2440 x 2440/3000

Note: 1. Barbed tape obstacles available in stainless steel &/or galvanised.
2. Customised sizes are available upon request subject to production feasibility.

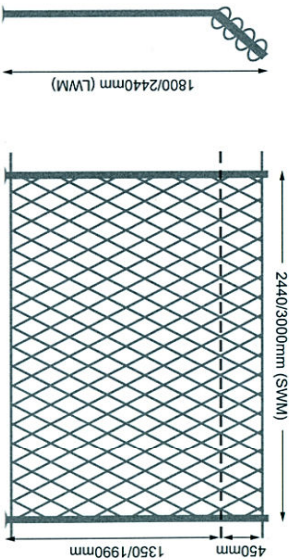
INSTALLATION 1

Expanded Security Fencing Mesh c/w stainless steel barbed obstacles (top) for maximum security.



INSTALLATION 2

Expanded Security Fencing Mesh c/w 45 degree inclination & stainless steel barbed obstacles (top) for maximum security.



High Security Fencing

BARBED TAPE: Specifications

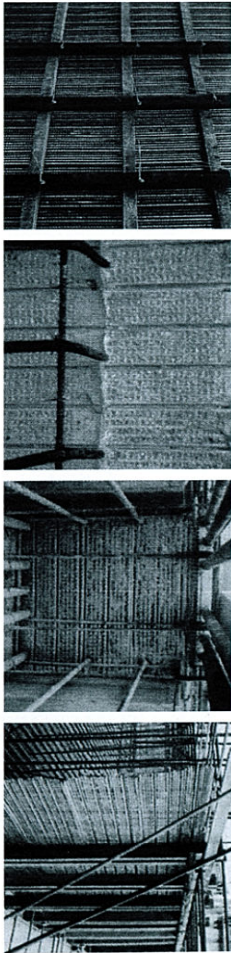
Category	Barbed Tape Reference	Material Type	Barbed Tape Width (mm)	Barbed Tape Height (mm)	Barbed Tape Thickness (mm)	Barbed Tape Strand (mm)	Barbed Tape Panel Size (mm)
High Security Fencing	B1	Hot-dipped Galvanised Steel	42	115	3.2	3.3	1800/2440 x 2440/3000
	B2	Hot-dipped Galvanised Steel	42	115	3.2	6.0	1800/2440 x 2440/3000
	B3	Hot-dipped Galvanised Steel	50	152	3.2	3.5	1800/2440 x 2440/3000
	B4	Hot-dipped Galvanised Steel	50	152	4.5	4.5	1800/2440 x 2440/3000
High Security Fencing	B5	Hot-dipped Galvanised Steel	75	200	3.2	4.0	1800/2440 x 2440/3000
	B6	Hot-dipped Galvanised Steel	75	200	4.5	5.5	1800/2440 x 2440/3000
	B7	Hot-dipped Galvanised Steel	15	75	2.0	3.0	1800/2440 x 2440/3000
High Security Fencing	B8	Hot-dipped Galvanised Steel	15	75	3.0	3.0	1800/2440 x 2440/3000
	B9	Stainless steel	15	75	3.0	3.0	1800/2440 x 2440/3000

SPECIFICATIONS

Coil Dia (mm)	500	700	960
# of Circle	56	72	52
Standard Covered Length (mm)	8-9	11-13	8-10
Maximal Covered Length (mm)	12	15	13

Formworks For Construction Joints

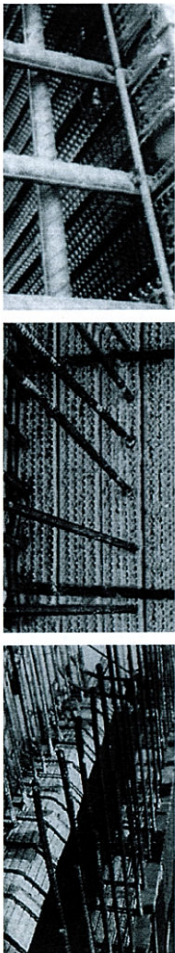
Conventional construction joints are created by casting concrete against timber formwork. After pour, the timber formwork is then stripped and removed; the concrete surface cast requires roughening before available for subsequent casting. Formation of joints by this method results in cracks in concrete due to hacking or chiselling, lack of uniformity in surface preparation and time-consuming. Worse still, the bonding strength formed may be inherently weak and insufficient to resist the load designed for.



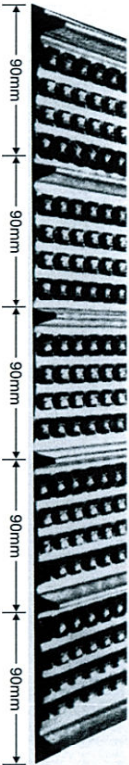
Metal formwork is designed to replace the tedious conventional construction joints and used as permanent formwork for construction joints or concrete stop ends. metal formwork or commonly referred to as "High-Ribbed" mesh by building contractors can save contractors time and money. Made from galvanised sheet, BMF's unique design incorporates mesh with roll-formed V-ribbed helps retain concrete grout.

- Other product benefits include:
- ☆ eliminates carpentry work, mesh is easily cut and bend.
 - ☆ no stripping/hacking or surface preparation for next pour.
 - ☆ open mesh design helps to reduce water/pour pressure.
 - ☆ flexibility in forming shapes, ideal for toggle joints or special joints application.
 - ☆ light as compared to timber formwork, ease for transportation and site installation. mesh design provides easy piercing of reinforcement rods and eliminates drilling operation required for plywood.

Formwork has found wide commercial applications for many building foundation, floor construction joints, columns, retaining walls and any stop ends. It can be used for any concrete grade complying with BS8110 grade 30-40 and slump 80 to 150mm.



Reference	Weight kg/m ² (±10%)	Size	Material
BMF 28G	3.39	450mm x 2200/2500mm	Galvanised
BMF 28G	4.86	450mm x 2200/2500mm	Galvanised

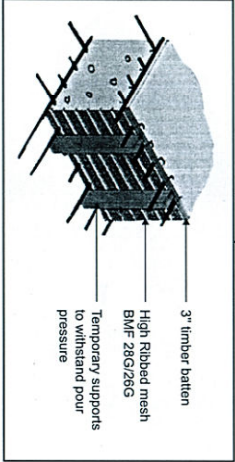


Formworks For Construction Joints

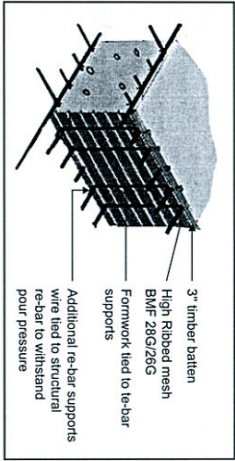
STEWORK INSTALLATION ADVISORY FOR CONCRETING JOINTS

Stework Installation For Metal Formwork (or high ribbed mesh)

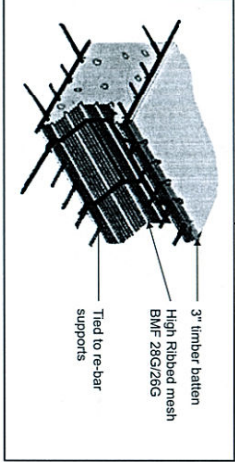
Standard Joint with timber supports



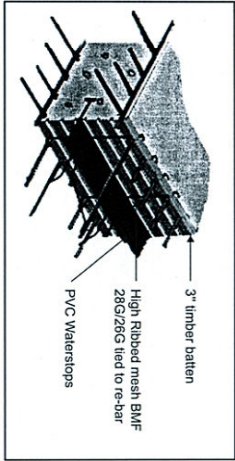
Standard Joint with re-bar supports



Toggle Joint with re-bar supports



Joint with PVC waterstop with re-bar supports



Recommended Spacing Of Vertical Supports

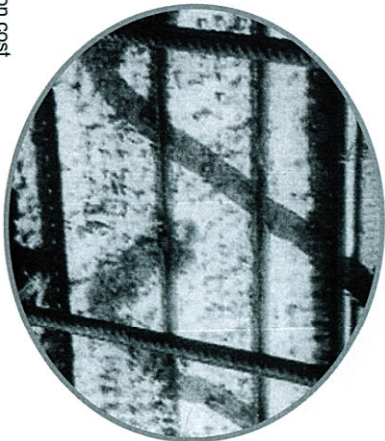
Depth Of Pour (Metres)	Horizontal Spacing Of Vertical Supports (Metres)	
	Formwork BMF28G	Formwork BMF26G
0.25	0.90	1.00
0.50	0.70	0.80
1.00	0.50	0.60
1.50	0.40	0.45
2.00	0.35	0.40
3.00	0.25	0.30

* Cross-members highly recommended for pour-pressure.

Concrete Mixes

Metal Formwork (or high ribbed mesh) is suitable for use in accordance to BS8110 concrete grade G30 or any other suitable grades, with slump preferably in the range between 80 to 150mm, and it can also be used in conjunction with all normally specified concrete mixes, including pump and plasticized. As a general rule, difficulty in forming the required surface effect may be encountered if the mix is excessively wet, dry or does not comply to building specifications.

Formworks For Construction Joints



Site installation is relatively time-saving and reduces installation cost. place mesh formwork along the construction joints by using temporary timber supports or existing rebars. After the concrete from the first pour has set, remove the temporary supports and the new surface is ready to receive subsequent concrete pour.

In order to minimise the impact loading on the formwork and ensure that a "dimpled" effect forms on its surface, it is advisable to vibrate the concrete at distance of 450mm away from High Ribbed mesh. During concreting, site supervisors must ensure that no voids are created behind the mesh, nor permit excessive concrete grout to flow down the face of the metal formwork.

During concreting, high ribbed mesh remains embedded in concrete to form permanent shuttering. It is important to ensure an adequate keying surface or a "dimpled" effect on the mesh. Concrete grout should be allowed to leach through each aperture in the "finger" pattern of the mesh, so as to minimise voids for effectiveness. (see picture) Formwork may be used with ribs placed horizontally or vertically, according to site conditions. For additional strengthening, support members must be placed against the mesh, at right angle to the ribs. In cases of deep pouring, it is recommended additional cross members be used to prop mesh to take high pour-pressure (see tabulation for support distance). To extend sheets lengthwise or depthwise, overlap adjacent sheets and tie them together with galvanised wires at 200mm intervals and preferably at temporary supports.

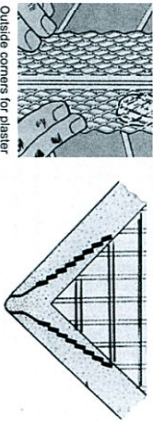
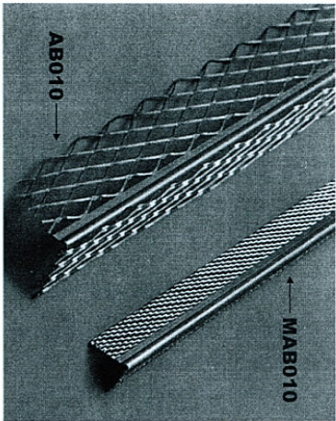
Metal Beads

ANGLE BEADS

Angle bead protects plaster from chipping at vulnerable corners of plastered walls and columns. It also helps to provide a straight arris for better finishing. The expanded wings provide a good anchorage for most types of plaster use. Fixing is fast and easy by applying plaster dabs or concrete nails, at 600mm centers along both sides of wings. Render coat is applied just below the nosing. The exposed nosing can be painted over with emulsion paint.

Minimesh angle bead (MAB) is the miniature version of angle bead for thin-coat plaster of 3-6mm render. It gives protection at exterior corner of plasterboard in partition works. Also applicable in cases where on coat render is required for concrete walls and slabs.

Product Reference	Packing / Carton
AB 010 MAB 010 (minimesh)	50pcs x 2440mm x 2700mm x 3000mm

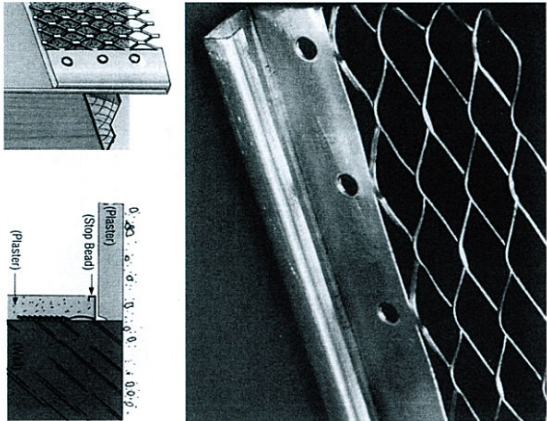


PLASTERSTOP BEADS

Stop bead comes with L-flange casing to give an ideal finish line to plasterwork. It offers protection for any stop ends, abutments and door jambs and skirting. Fixing is accomplished by applying plaster dabs or concrete nails to the wing.

Various range available to suit different plaster depths. Both angle beads and plasterstop beads are available in stainless steel for highly corrosive environment.

Product Reference	Packing / Carton
PS 013 (13mm plaster) PS 019 (19mm plaster)	50pcs x 2440mm x 2700mm x 3000mm



Metal Laths

Metal Lathing

Expanded lath is commonly used for providing key for plaster and render work. Commercial applications include partitioning, suspended ceiling and structural encasement for fireproofing incorporating vermiculite plaster. The jointless and continuity of expanded metal-lath is used as background plaster to reinforce against plaster cracks, and relieving stress at joints of dissimilar material.

Product Reference	Thickness (mm)	Weight (Kg/m ² ±10%)	Sheet Size (mm x mm)	Recommended Applications
BML 26G	0.45	1.00	2440 x 610 2440 x 1220	Background plaster, landscape, junction between dissimilar materials.
BML 24G	0.60	1.61	2440 x 610 2440 x 1220	Partitioning, 2-hour fire proofing, suspended ceiling.
BML 22G	0.80	1.84	2440 x 610 2440 x 1220	Partitioning, 4-hour fire proofing, suspended ceiling.

Load/Span Table for Suspended Ceiling Plaster

Sub-runners size	20 x 10 mm	40 x 10 mm	50 x 15 mm	For ceiling plaster For BML 24G max render coat = 20mm BML 22G = 25mm
Main runner span	1200	1800	2400	
Sub-runners	300 600	300 600	300 600	For BML 22G/24G For Ribbed lath SRL 29G

Ribbed Lathing

Ribbed-lath is expanded metal-lath stiffened with longitudinal ribs. The turning design of the mesh provides efficient background plaster for construction of partition, suspended ceilings and refurbishment works. The advantage of ribbed-lath over metal-lathing is that support centers can be increased or widened.

Product Reference	Thickness (mm)	Weight (Kg/m ² ±10%)	Sheet Size (mm x mm)	Recommended Applications
SRL 29G	0.30	1.30	2200/2500	Background plaster, partitioning, structural encasement, suspended ceiling, arch formation, construction joints for shallow slabs, retrofitting works, etc.
SRL 26G	0.45	2.00	610	

Stripmesh (SDM Series) / Brickmesh

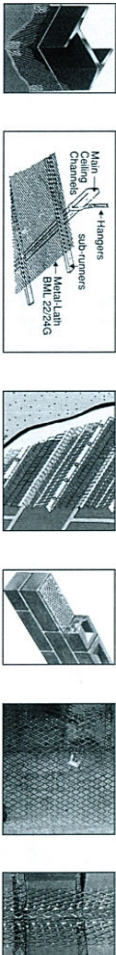
SDM stripmesh is used to prevent plaster crack along line of stress between brick/concrete walls. Brickmesh acts as reinforcement for block or brick walls. When embedded in cement mortar at every fourth joints, it forms an integral structure to absorb stress and vibration in building.

Product Reference	Mesh Opening	Width x Length	Material	Strips/Bundle	Thickness
SDM 06S		65 x 1220, 2440mm	Galvanised	100	22G or 26G
SDM100		100 x 1220, 2440mm	Galvanised	100	
SDM150		150 x 1220, 2440mm	Galvanised	100	
SDM200		200 x 1220, 2440mm	Galvanised	100	
SDM300	16 x 38mm	300 x 1220, 2440mm	Galvanised	100	26G

Stripmesh (SM Series)

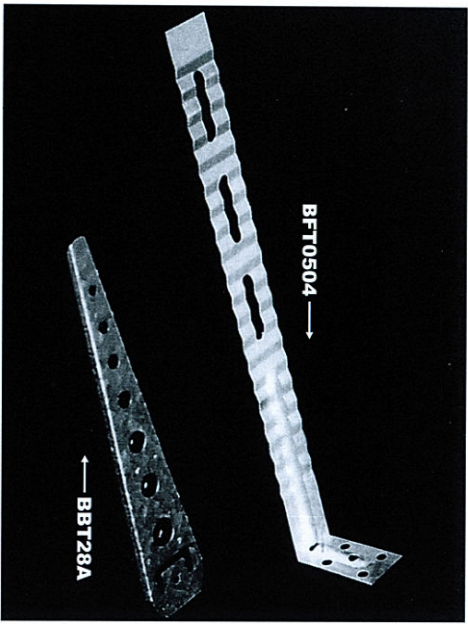
SM stripmesh is efficient for reinforcement of external and internal render along line of stress. Used for relieving stress and prevent plaster cracks over dissimilar materials, cover over steel lintels and service chassiss.

Product Reference	Mesh Opening	Width x Length	Material	Strips/Bundle	Thickness
SM 100		100 x 1220, 2400mm	Galvanised	100	22G or 26G
SM 150		150 x 1220, 2400mm	Galvanised	100	
SM 200	10 X 20mm	200 x 1220, 2400mm	Galvanised	100	
SM 300		300 x 1220, 2400mm	Galvanised	100	
SM 100		50 x 50 x 1220mm	Galvanised	100	

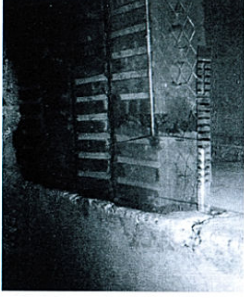


Frame / Brick Ties

Brick - Tie Ref BBT28A Frame - Tie Ref BFT0504



- ☆ Masonry ties to timber/door frame, steel frame &/or concrete columns to secure brick or light weight block walls.
- ☆ Brick Tie and Frame Tie acts as reinforcement for brick and block walls when embedded in cement mortar at every fourth course (ie 400mm - 450mm brick/block height interval).
- ☆ Masonry frame/brick tie acts as connection and permit in plane movement to accommodate differential movements in built-up brick/block wall.
- ☆ Brick Tie and Frame Tie are corrosion resistance manufactured using high quality galvanized steel (BS 2989:1982 ZG275).
- ☆ Fixing by using nail/nail gun or bolt.



Steel Lintels

Internal Lintel BIL 70/100

Introduction

Steel Lintels is used to replace conventional casting of concrete lintels over door openings. Light weight lintels are manufactured using steel of galvanised coating type Z275 for anti-corrosion. It complies with the requirements and conforms to BS5950 Part 2.

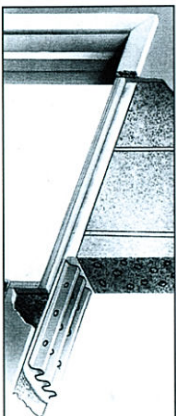
The product offers the following benefits:

- ☆ Light weight yet stronger than conventional concrete lintels.
- ☆ Easy to install into position without heavy lifting equipment needed.
- ☆ High quality corrosion protection system i.e. galvanised to G275 for both internal and U-channel Lintels.

- ☆ Material design for better key to plaster.

- ☆ Safe working loads are tabulated for reference to the type and design loads for end-users.

- ☆ Eliminates the need to cast concrete and saves time resulting in more speedy construction of walls.



Lintel Ref.No.	Overall Length Of Lintel(mm)	Maximum Span Of Opening (mm)	Width Of Lintel(mm)	*Safe Distributed Loading (Tonnes)
BIL 100	900	700	70/100	0.20 - 0.70 mT
BIL 70	1050	850	70/100	
	1100	900	70/100	
	1200	1000	70/100	

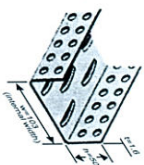
▲ Highly recommended to lay 1st course of bricks and set for 1 day before continuing subsequent brick laying to minimise deflection.

U-Channel Lintels

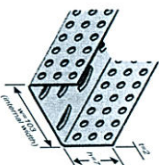
Lintel Ref.No.	BSL 103		BSL 103A		BSL 103B		BSL 103C		BSL 103D	
Manufactured Lengths	0800	1300	0800	1300	0800	1300	0800	1300	1900	1900
100mm increments	1200	1500	1200	1500	1200	1500	1200	1500	2000	2000
Height 'h' (mm)	50	50	75	75	75	75	75	75	100	100
Material Thickness 't' (mm)	1.6	1.6	1.6	2.0	2.0	2.0	2.6	2.6	2.6	2.6
Internal Width (mm)	103	103	103	103	103	103	103	103	103	103
Total UDL (tonnes)	0.28	0.22	0.45	0.45	0.56	0.43	0.98	0.60	1.25	1.00
± 10% Weight (kg/m)	2.65	3.18	3.18	3.97	3.97	3.97	5.20	5.20	6.18	6.18
Ymax (cm)	8.4	8.4	25.0	31.2	31.2	31.2	40.6	40.6	87.5	87.5
Zmax (cm)	3.8	3.8	5.3	5.3	5.3	5.3	6.7	6.7	13.1	13.1
Allowable Moment (Nm)	357	2.2	4.7	4.7	5.9	5.9	7.7	7.7	13.1	13.1
		357	763	763	958	958	1251	1251	2128	2128

Allowable Moment, Yield Stress 250 N/mm²

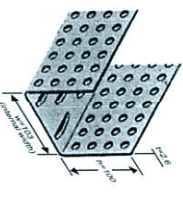
▲ All dimensions in mm.



BSL 103B



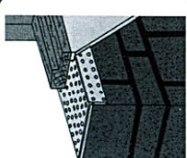
BSL 103D

EXPANDED METALLIC
Steel Lintels

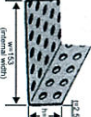
Lintel Ref.No.	BSL 153A		BSL 153B		BSL 153C		BSL 153D	
Manufactured Lengths	0800	1300	0800	1300	0800	1300	0800	1300
100mm increments	1200	1500	1200	1500	1200	1500	1200	1500
Height 'h' (mm)	50	50	50	50	50	50	50	50
Material Thickness 't' (mm)	2.0	2.0	2.5	2.5	2.5	3.2	3.2	3.2
Internal Width (mm)	153	153	153	153	153	153	153	153
Total UDL (tonnes)	0.50	0.38	0.77	0.57	0.43	1.25	0.79	0.54
± 10% Weight (kg/m)	3.8	3.8	4.85	4.85	4.85	6.05	6.05	6.05
Ymax (cm)	8.4	8.4	10.6	10.6	10.6	13.1	13.1	13.1
Zmax (cm)	3.8	3.8	5.3	5.3	5.3	6.7	6.7	6.7
Allowable Moment (Nm)	357	2.2	4.7	4.7	5.9	5.9	7.7	7.7
		357	763	763	958	958	1251	1251

Allowable Moment, Yield Stress 250 N/mm²

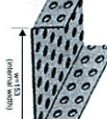
▲ All dimensions in mm.



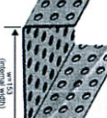
BSL 153B



BSL 153C



BSL 153D



Lintel Ref.No.	BSL 203A		BSL 203B		BSL 203C		BSL 203D	
Manufactured Lengths	0800	1300	0800	1300	0800	1300	0800	1300
100mm increments	1200	1500	1200	1500	1200	1500	1200	1500
Height 'h' (mm)	50	50	50	50	50	50	50	50
Material Thickness 't' (mm)	2.0	2.0	2.5	2.5	2.5	3.2	3.2	3.2
Internal Width (mm)	203	203	203	203	203	203	203	203
Total UDL (tonnes)	0.63	0.50	0.80	0.60	0.40	1.07	0.80	0.55
± 10% Weight (kg/m)	4.5	4.5	5.71	5.71	5.71	7.24	7.24	7.24
Ymax (cm)	8.4	8.4	10.6	10.6	10.6	13.1	13.1	13.1
Zmax (cm)	3.8	3.8	5.3	5.3	5.3	6.7	6.7	6.7
Allowable Moment (Nm)	357	2.2	4.7	4.7	5.9	5.9	7.7	7.7
		357	763	763	958	958	1251	1251

Allowable Moment, Yield Stress 250 N/mm²

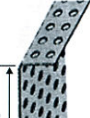
▲ All dimensions in mm.



BSL 203B



BSL 203C



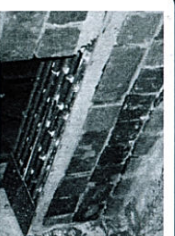
BSL 203D



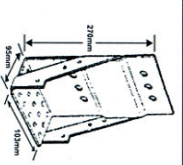
Fixing Accessories For Lintels Recommended Loads

Bracket Reference	Suitable For Lintels	Maximum Load (KN) / bracket
LB 1030	BIL 100-BSL 103A,B,C,D	5.00
LB 100	BIL 100-BSL 103A,B,C,D	2 No.-8/10
		4 No.-8/10
		7.20
		4 No.-8/10

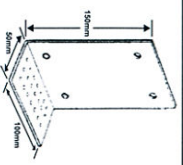
Note: It is advisable to contact specific manufacturer for bolts and anchors for recommendation (Hilti, Ramset, ect)



LB 1030



LB 100



Steel Lintels

Internal Lintel BIL 70/100

Introduction

Steel Lintels is used to replace conventional casting of concrete lintels over door openings. Light weight lintels are manufactured using steel of galvanised coating type Z275 for anti-corrosion. It complies with the requirements and conforms to BS5950 Part 2.

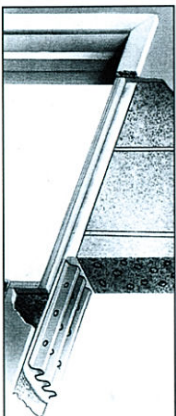
The product offers the following benefits:

- ☆ Light weight yet stronger than conventional concrete lintels.
- ☆ Easy to install into position without heavy lifting equipment needed.
- ☆ High quality corrosion protection system i.e. galvanised to G275 for both internal and U-channel Lintels.

- ☆ Material design for better key to plaster.

- ☆ Safe working loads are tabulated for reference to the type and design loads for end-users.

- ☆ Eliminates the need to cast concrete and saves time resulting in more speedy construction of walls.



Lintel Ref.No.	Overall Length Of Lintel(mm)	Maximum Span Of Opening (mm)	Width Of Lintel(mm)	*Safe Distributed Loading (Tonnes)
BIL 100	900	700	70/100	0.20 - 0.70 mT
BIL 70	1050	850	70/100	
	1100	900	70/100	
	1200	1000	70/100	

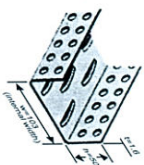
▲ Highly recommended to lay 1st course of bricks and set for 1 day before continuing subsequent brick laying to minimise deflection.

U-Channel Lintels

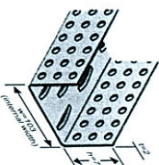
Lintel Ref.No.	BSL 103		BSL 103A		BSL 103B		BSL 103C		BSL 103D	
Manufactured Lengths	0800	1300	0800	1300	0800	1300	0800	1300	1900	1900
100mm increments	1200	1500	1200	1500	1200	1500	1200	1500	2000	2000
Height 'h' (mm)	50	50	75	75	75	75	75	75	100	100
Material Thickness 't' (mm)	1.6	1.6	1.6	2.0	2.0	2.0	2.6	2.6	2.6	2.6
Internal Width (mm)	103	103	103	103	103	103	103	103	103	103
Total UDL (tonnes)	0.28	0.22	0.45	0.45	0.56	0.43	0.98	0.60	1.25	1.00
± 10% Weight (kg/m)	2.65	3.18	3.18	3.97	3.97	3.97	5.20	5.20	6.18	6.18
Ymax (cm)	8.4	8.4	25.0	31.2	31.2	31.2	40.6	40.6	87.5	87.5
Zmax (cm)	3.8	3.8	5.3	5.3	5.3	5.3	6.7	6.7	13.1	13.1
Allowable Moment (Nm)	357	2.2	4.7	4.7	5.9	5.9	7.7	7.7	13.1	13.1
		357	763	763	958	958	1251	1251	2128	2128

Allowable Moment, Yield Stress 250 N/mm²

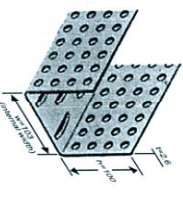
▲ All dimensions in mm.



BSL 103B



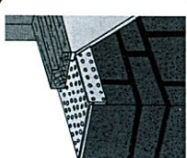
BSL 103D

EXPANDED METALLIC
Steel Lintels

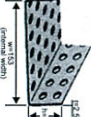
Lintel Ref.No.	BSL 153A		BSL 153B		BSL 153C		BSL 153D	
Manufactured Lengths	0800	1300	0800	1300	0800	1300	0800	1300
100mm increments	1200	1500	1200	1500	1200	1500	1200	1500
Height 'h' (mm)	50	50	50	50	50	50	50	50
Material Thickness 't' (mm)	2.0	2.0	2.5	2.5	2.5	3.2	3.2	3.2
Internal Width (mm)	153	153	153	153	153	153	153	153
Total UDL (tonnes)	0.50	0.38	0.77	0.57	0.43	1.25	0.79	0.54
± 10% Weight (kg/m)	3.8	3.8	4.85	4.85	4.85	6.05	6.05	6.05
Ymax (cm)	8.4	8.4	10.6	10.6	10.6	13.1	13.1	13.1
Zmax (cm)	3.8	3.8	5.3	5.3	5.3	6.7	6.7	6.7
Allowable Moment (Nm)	357	2.2	4.7	4.7	5.9	5.9	7.7	7.7
		357	763	763	958	958	1251	1251

Allowable Moment, Yield Stress 250 N/mm²

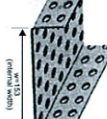
▲ All dimensions in mm.



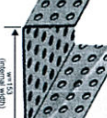
BSL 153B



BSL 153C



BSL 153D



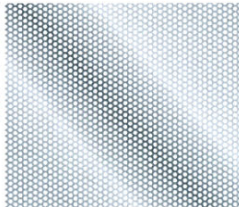
Lintel Ref.No.	BSL 203A		BSL 203B		BSL 203C		BSL 203D	
Manufactured Lengths	0800	1300	0800	1300	0800	1300	0800	1300
100mm increments	1200	1500	1200	1500	1200	1500	1200	1500
Height 'h' (mm)	50	50	50	50	50	50	50	50
Material Thickness 't' (mm)	2.0	2.0	2.5	2.5	2.5	3.2	3.2	3.2
Internal Width (mm)	203	203	203	203	203	203	203	203
Total UDL (tonnes)	0.63	0.50	0.80	0.60	0.40	1.07	0.80	0.55
± 10% Weight (kg/m)	4.5	4.5	5.71	5.71	5.71	7.24	7.24	7.24
Ymax (cm)	8.4	8.4	10.6	10.6	10.6	13.1	13.1	13.1
Zmax (cm)	3.8	3.8	5.3	5.3	5.3	6.7	6.7	6.7
Allowable Moment (Nm)	357	2.2	4.7	4.7	5.9	5.9	7.7	7.7
		357	763	763	958	958	1251	1251

Allowable Moment, Yield Stress 250 N/mm²

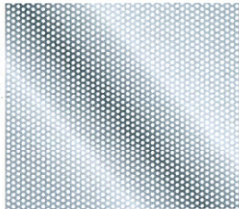
▲ All dimensions in mm.

Perforated Metals

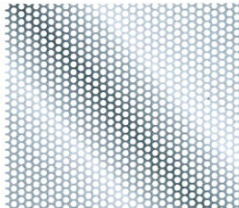
EXPANDED METALLIC



1 0.6" x 1.36" 17.6% open



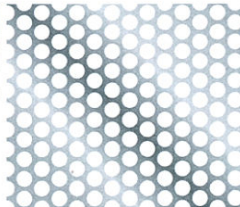
2 0.8" x 1.55" 24.2% open



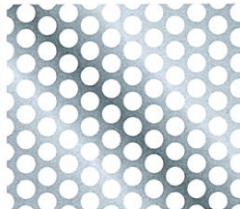
3 1" x 1.5" 34.9% open



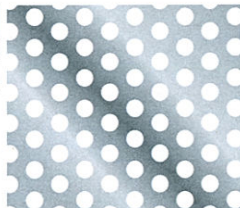
4 2" x 3" 34.9% open



5 2.5" x 4" 35.4% open



6 3" x 5" 32.6% open



7 3" x 6" 22.6% open



8 4" x 7" 29.6% open



9 5" x 8" 35.4% open



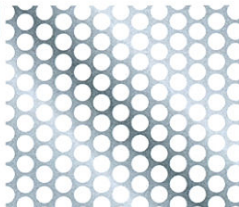
10 6" x 10" 40.2% open



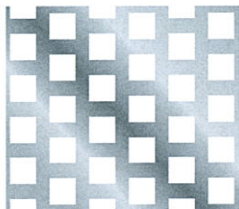
11 7" x 10" 44.4% open



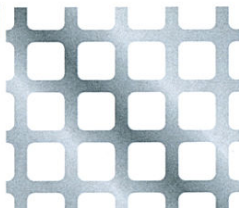
12 8.2" x 13" 36% open



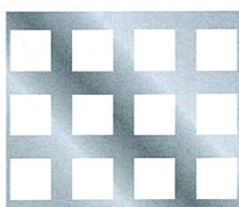
13 3.5" x 5" 44.4% open



14 5" x 8" 38% open



15 7" x 10" 49% open



16 8.2" x 13" 37.9% open

We are one of the specialized manufacturers in Perforated nets. The products can be used everywhere from daily life to heavy industry. It can suit the chemical industry, filtering, venting and paper industry. Material: Mild Steel, Stainless Steel, Aluminum, Copper, Galvanized etc. We also can provide the customer with special size. Size: 3' x 6', 4' x 8' or 5' x 10' etc. Specification: The hole size, pitch, in addition to the shown sheet can vary depending on customer's need.

High Security Fencing

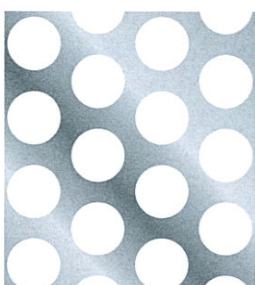
EXPANDED METALLIC



17 8" x 12" 40.2% open



18 9" x 12" 50.9% open



18 10" x 12" 50.9% open



20 2.5" x 20" 23.6% open



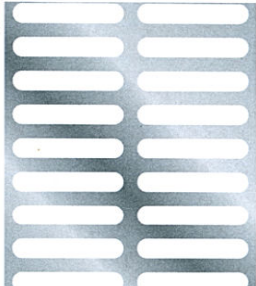
21 6" x 20" 37.2% open



22 4" x 20" 41.2% open



23 2.76" x 10.24" 71.6% open



24 3.5" x 21" 48% open



25 1.37" x 8.27" 48% open



26 7" x 26" 71.6% open

PERCENTAGE OPEN AREA & HOLE NOS CALCULATION

% Open Area = $78.54 \left(\frac{b}{d}\right)^2$
Hole Number = $5.4 \times 25.4 \div P^2$
Arrangement=90°

% Open Area = $90.69 \left(\frac{b}{d}\right)^2$
Hole Number = $5.4 \times 25.4 \div 1.732 \times P^2$
Arrangement=60°