



MENTIS EXPANDED METAL

INTRODUCTION

MENTEX GENERAL PURPOSE MESHES

Are available in a comprehensive range of sizes, mass and thicknesses and adequate quantities of these meshes are either kept in stock, or can be manufactured with little delay.

It is however advisable, wherever possible, to select a stock size.

VERSATILE

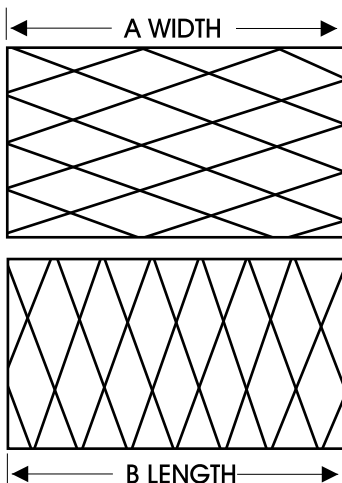
It can be bent, shaped to radii, cut at an angle, or notched, and will still maintain its inherent rigidity. It can also be welded, formed, drawn or flared. Nowadays, expanded metal is used for a multitude of industrial, decorative and other purposes.

AVAILABLE IN A WIDE RANGE OF MESHES

From as small as 1,6mm S.W.M. to meshes as large as 115mm S.W.M. x 300mm L.W.M. Moreover, in each size of mesh, variations in strand width and thickness can be produced. The wide range of meshes and thicknesses are given in the table of properties for Mentex Expanded Metal on the following pages: 4, 6 and 10.

A wide range of mini-meshes can also be supplied to suit customers requirements.

NON-STANDARD SIZES of sheets and rolls can be supplied subject to manufacturing and transport limitations.



WHEN ORDERING

Please state clearly the REFERENCE No. of the mesh, QUANTITY and SIZES of sheets or rolls required. If sheets are to be cut to special sizes, please state clearly which dimension is to be the direction of the longway (L.W.M) and which dimension is to be the shortway. (S.W.M) of the mesh. Note, the longway of mesh dimension should always be stated first, e.g. thus: 1 000 mm L.W.M x 2 000 S.W.M.

OTHER METALS:

All Mentex meshes, except building products, are also available in Aluminium, quality 2SH4. Gilding metal, brass, half hard copper, or any other ductile metal can also be expanded by special arrangement, e.g. Silver, lead, plastic, incoloy, titanium, etc.

STAINLESS STEEL:

Most meshes are available to order by special arrangement in grade 304L, 316L and 3CR12, except Fencing and Building Products. Most of the Flatex meshes can be manufactured in stainless steel, and these meshes will be quoted for on request. Scroll meshes or louvre meshes are not available in stainless steel. Other grades of stainless steel are not entirely suitable for expanding.

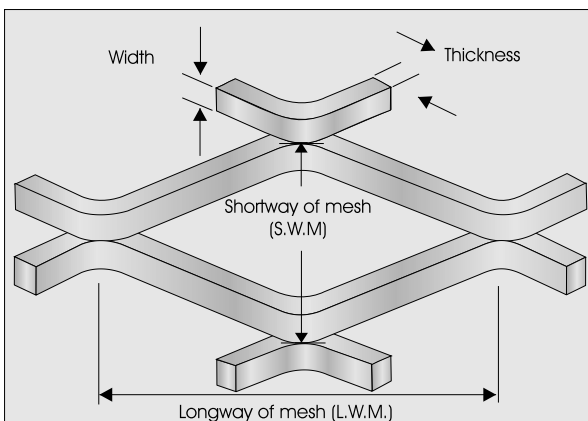
SELECTION:

The Company is always ready to advise you on any application and will recommend a suitable mesh for your specific requirement if full details of the proposed use are given to us.

When specifying, the Long Way Mesh (L.W.M) should always precede the Short Way Mesh (S.W.M) dimensions. To illustrate this point, sheet A measures 2400mm L.W.M x 1200mm. S.W.M, and sheet B measures 1200mm. L.W.M x 2400mm. S.W.M.

SHEET SIZE TOLERANCES:

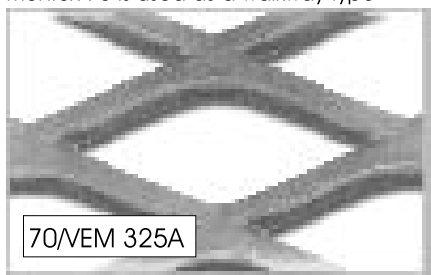
1. On S.W.M: ± 1 S.W.M or ± 25 mm whichever is greater.
2. On L.W.M:
 - (a) When L.W.M does not exceed 5mm: ± 20 mm
 - (b) When L.W.M exceeds 5mm: $\pm 1\%$ of sheet width(L.W.M).
3. On strand thickness and strand width: $\pm 10\%$ of catalogue dimensions for all Mentex, Florex and Walkway meshes, Fencing, Lathing, Brickforce and Decorative meshes.
All Flatex meshes = $\pm 20\%$ of catalogue dimensions.
4. Out of square of sheet = 2mm per 100mm of sheet length (S.W.M)
5. On sheets guillotined from standard widths and lengths to specific sizes: 3mm in both directions.
6. Mass of sheets: $\pm 20\%$ of catalogue mass.



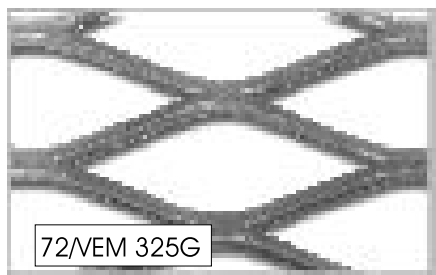


MENTEX GENERAL PURPOSE MESHES

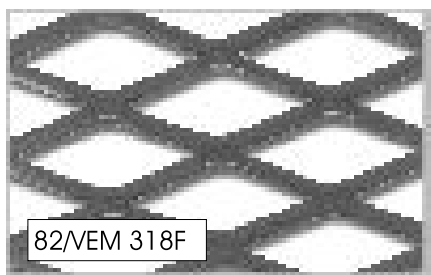
Mentex 70 is used as a walkway type



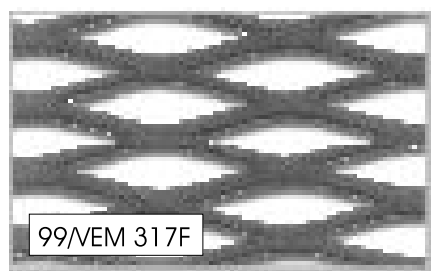
25 SWM x 60 LWM x 6mm wide x 4.5mm thick strand.



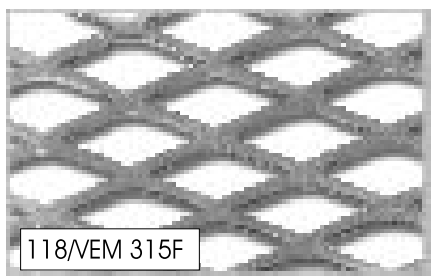
25 SWM x 60 LWM x 3mm wide x 3mm thick strand.



15 SWM x 40 LWM x 2,5mm wide x 1,6mm thick strand.



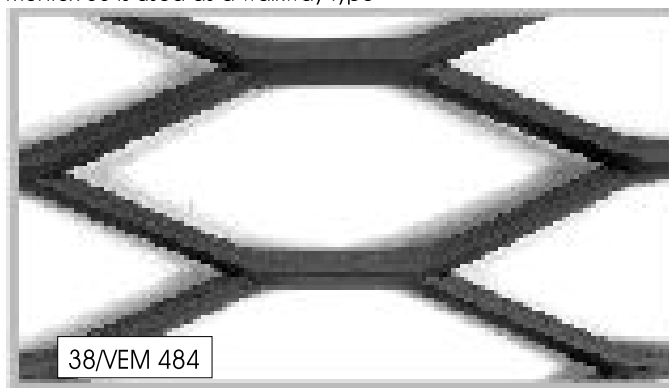
13 SWM x 38 LWM x 2,5mm wide x 1,6mm thick strand.



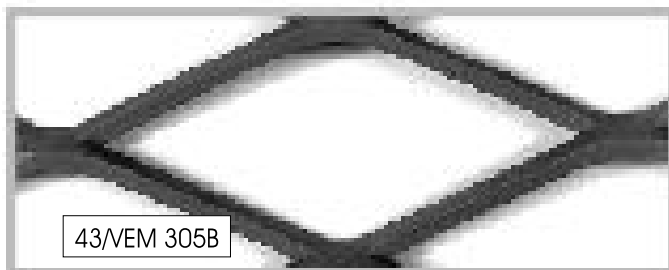
16 SWM x 30 LWM x 2,5mm wide x 1,6mm thick strand.

* ILLUSTRATIONS ARE NOT NECESSARILY ACTUAL SIZE.

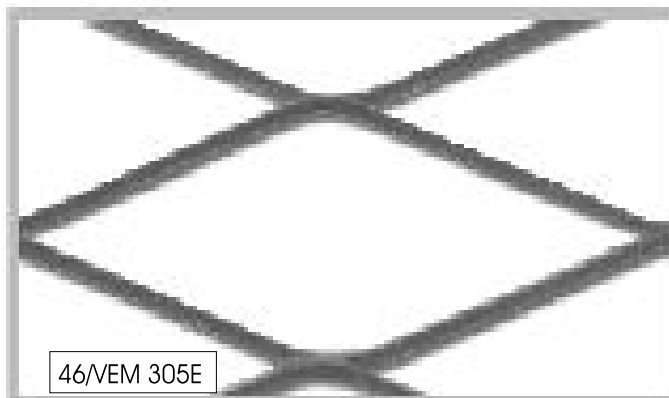
Mentex 38 is used as a walkway type



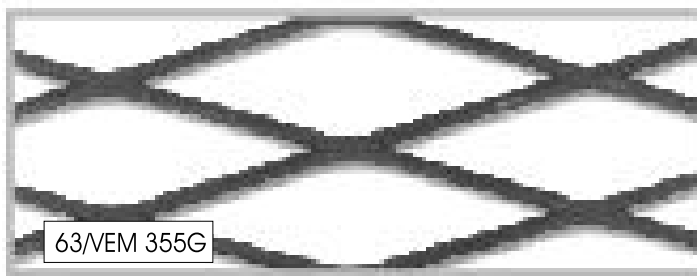
40 SWM x 140 LWM x 6mm wide x 4,5mm thick strand.



40 SWM x 115 LWM x 6mm wide x 4,5mm thick strand.



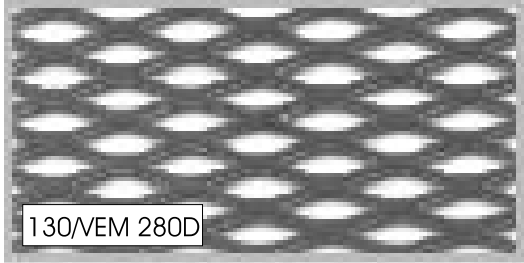
40 SWM x 115 LWM x 3mm wide x 3mm thick strand.



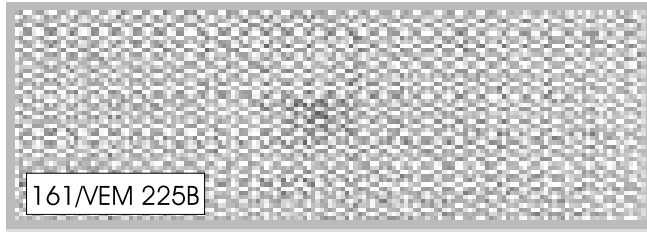
30 SWM x 80 LWM x 3mm wide x 3mm thick strand.



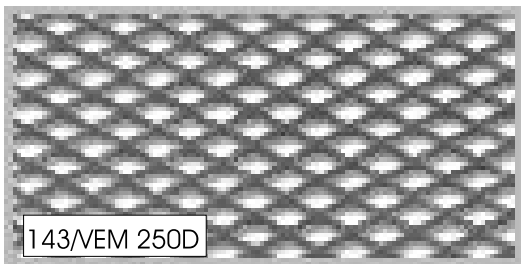
MENTEX GENERAL PURPOSE MESHES



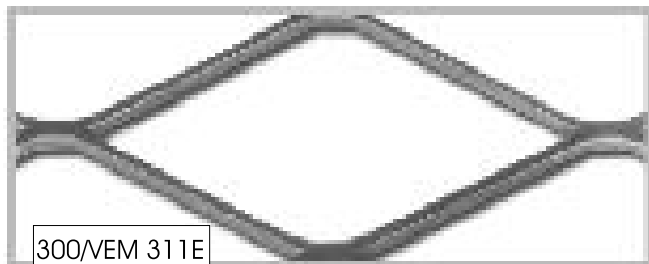
8 SWM x 20 LWM x 2,0mm wide x 1,0mm thick strand.



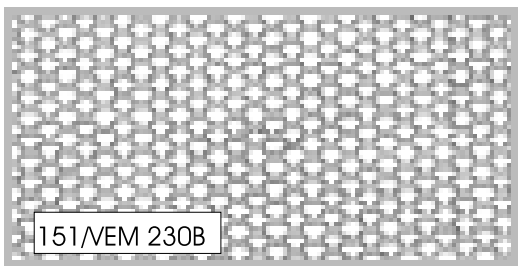
1,6 SWM x 3 LWM x 0,5mm wide x 0,5mm thick strand.



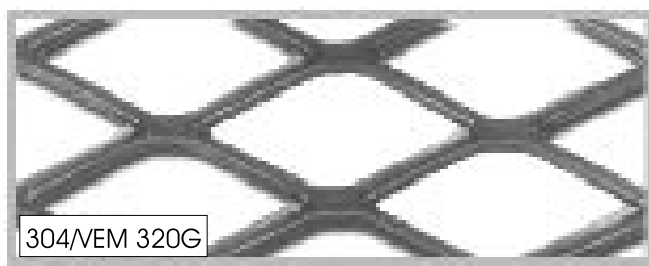
5 SWM x 10 LWM x 1,0mm wide x 1,0mm thick strand.



45 SWM x 80 LWM x 3mm wide x 3mm thick strand.



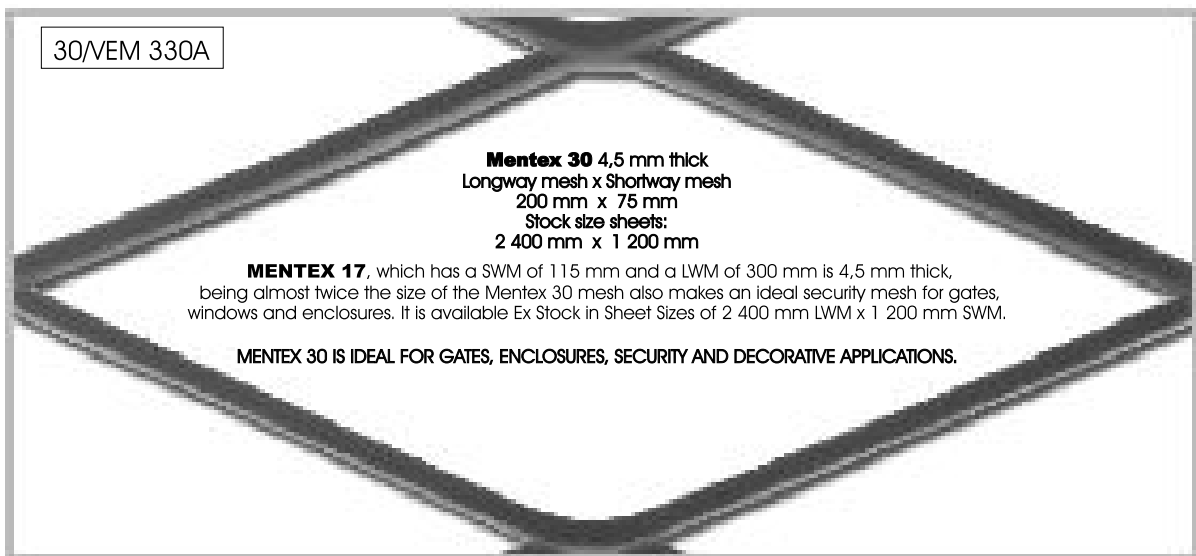
3 SWM x 6 LWM x 1,0mm wide x 0,5mm thick strand.



25 SWM x 50 LWM x 3mm wide x 3mm thick strand.

Note: Prices are based on standard widths (LWM). Where intermediate widths are required, the price is based on the next higher standard width, plus cutting charges for reducing the sheet down to the exact sizes required.

** We reserve the right to change specification without prior notification.*



* ILLUSTRATIONS ARE NOT NECESSARILY ACTUAL SIZE.



MENTEX GENERAL PURPOSE MESHES

Mentex General Purpose Meshes (Available to Order)

Ref.No	Metric Designation B A C D	Nominal size of diamonds centre to centre of strands		Nominal dimensions of strands		Mass kg. per m ²	Shown below are various standard sheet widths (Longway of mesh) which are available to order and can be manufactured with no extra machining costs mm	Maximum lengths (Shortway of mesh) available to order for different types of MENTEX
		SWM or width for B in mm (see sketch)	LWM or length for A in mm (see sketch)	C Width in mm	D Thickness in mm			
1 / 300D	30/115/95/45	30	115	9,5	4,5	21.58	600, 1 000, 1 200	3 000mm
* 30/330A	75/200/50/45	75	200	5,0	4,5	4.32	2 400	5 000mm
41/305D	40/115/100/45	40	115	10,0	4,5	14.42	1 200, 2 400	3 000mm
42/305C	40/115/80/45	40	115	8,0	4,5	10.79		
* 43/305B	40/115/60/45	40	115	6,0	4,5	8.09		
* 43A/305A	40/115/45/45	40	115	4,5	4,5	6.14		
46/305E	40/115/30/30	40	115	3,0	3,0	2.86		
60/355J	30/80/60/45	30	80	6,0	4,5	11.10	1 200, 2 400	3 000 mm
61/355H	30/80/50/30	30	80	5,0	3,0	6.31		
* 63/355G	30/80/30/30	30	80	3,0	3,0	3.92		
* 70/325A	25/60/60/45	25	60	6,0	4,5	13.87	1 200, 2 400	3 000mm
* 72/325G	25/60/30/30	25	60	3,0	3,0	4.90		
* 80A/318H	15/40/30/25	15	40	3,0	2,5	6.11	1 200	3 000mm
* 82/318F	15/40/25/16	15	40	2,5	1,6	3.34		
90/317K	13/38/60/16	13	38	6,0	1,6	15.08	1 200	3 000mm
99/317F	13/38/25/16	13	38	2,5	1,6	4.63		
* 118/315F	16/30/25/16	16	30	2,5	1,6	4.01	1 200	3 000mm
118A/315J	16/30/20/16	16	30	2,0	1,6	3.14		
* 130/280D	8/20/20/10	8	20	2,0	1,0	3.27	1 200	3 000mm
* 143/250D	5/10/10/10	5	10	1,0	1,0	2.67	600, 1 200	3 000mm
151/230B	3/6/10/5	3	6	1,0	0,5	2.10 2.67 0.91	1 200mm in mild steel 1 200mm in 3CR12 only 600mm in aluminium	2 500m
161	1,6/3/5/5	1,6	3	0,5	0,5	0.85 0.85	600 in aluminium only	2 500mm 1 200mm
* 300/331E	45/80/30/30	45	80	3,0	3,0	2.75	1 000, 1 200, 2 400	3 000mm
* 304/320G	25/50/30/30	25	50	3,0	3,0	4.90	1 000, 1 200, 2 400	3 000mm
306/320C	25/50/30/16	25	50	3,0	1,6	2.62		

* AVAILABLE EX STOCK

WE RESERVE THE RIGHT TO CHANGE SPECIFICATION WITHOUT PRIOR NOTIFICATION.



FLATEX EXPANDED METAL

Many meshes of the Mentex Range can be flattened by passing the sheet through heavy rollers and bringing the angular ridges of the strands and junctions, formed by the drawing process, into the same plane to give a smooth flat surface. This type of material is known as Flatex and retains the attractive tailored appearance of the diamond-shaped mesh.

The thickness of the metal is slightly decreased by the flattening process and the size of the openings vary from their original size according to the change of plane of the strands. The smooth surface of Flatex permits its use for shelving on which objects can more easily stand or be moved without tipping over or catching on the strands of the mesh.

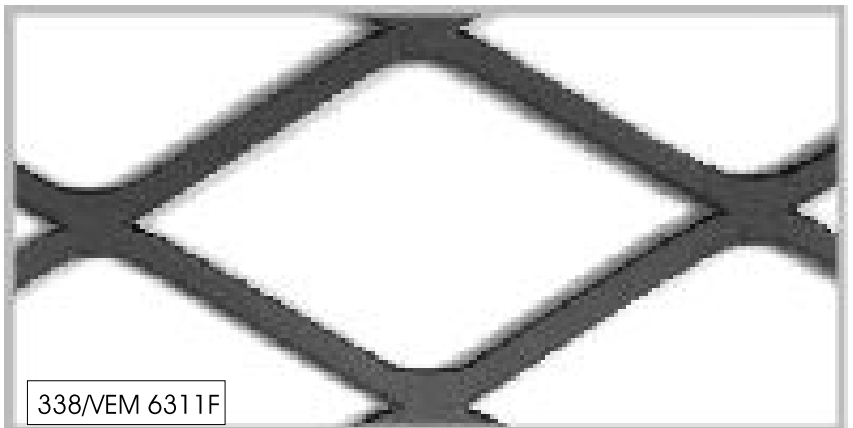
Typical uses include shelving, racks, trays, crates, frying baskets, dipping trays, animal and poultry cages, duckboards, drainage filters, screens, grilles, machinery guards, etc. It should be specified wherever a smooth flat-surfaced mesh is required.

The range of meshes and thicknesses for this material is given in the table of properties on the next page.

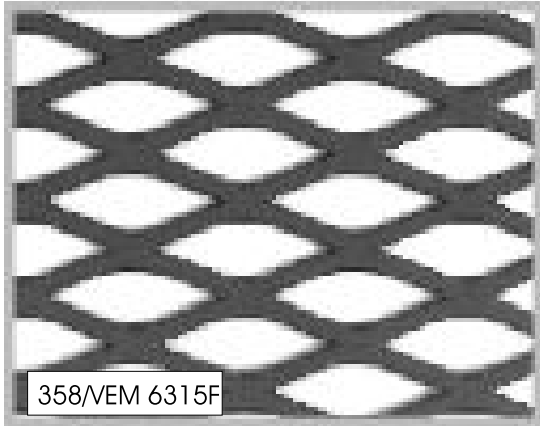
ILLUSTRATIONS ARE NOT NECESSARILY ACTUAL SIZE.



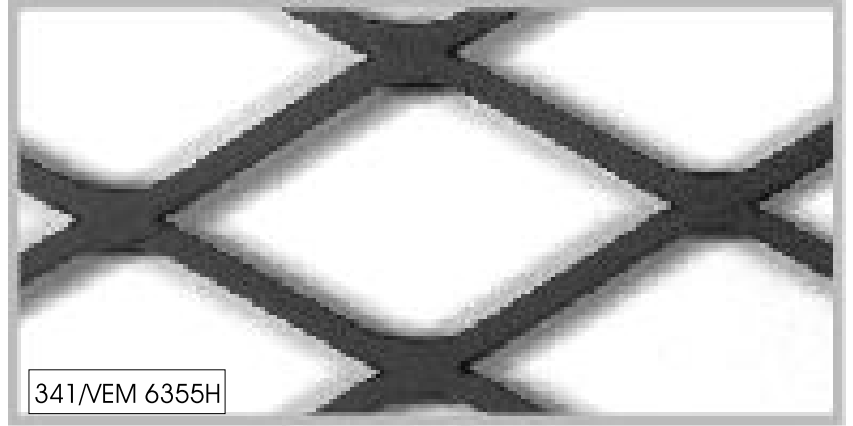
15 SWM x 40 LWM x 3,0 mm width x 1,6 mm thick strand



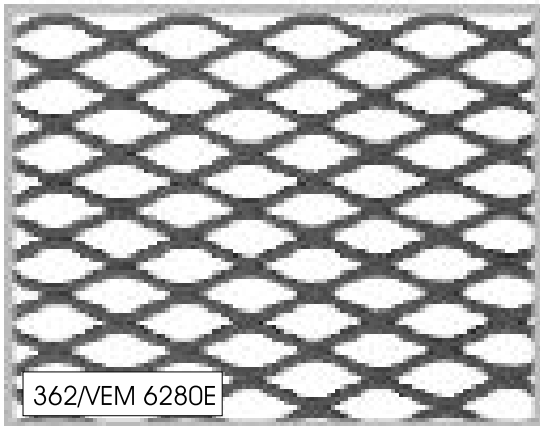
50 SWM x 80 LWM x 4,5 mm width x 2,5 mm thick strand



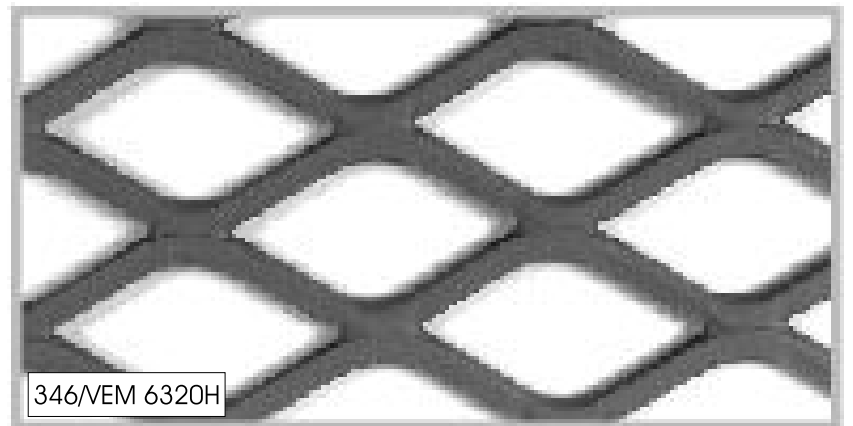
16 SWM x 30 LWM x 3,0 mm width x 1,6 mm thick strand



30 SWM x 80 LWM x 4,5 mm width x 2,5 mm thick strand



8 SWM x 20 LWM x 2,0 mm width x 1,0 mm thick strand



25 SWM x 50 LWM x 4,5 mm width x 3,0 mm thick strand



Flatex Meshes (Available to Order)

Ref.No	Metric Designation B A C D	Nominal size of diamonds centre to centre of strands		Nominal dimensions of strands		Mass kg. per m ²	Shown below various standard sheet widths (Longway of mesh) which are available to order and can be manufactured with no extra machining costs mm	Maximum lengths (Shortway of mesh) available to order for different types of FLATEX
		SWM or width for B in mm (see sketch)	LWM or length for A in mm (see sketch)	C Width in mm	D Thickness in mm			
* 338/6311F	50/80/45/25	50	80	4,5	2,5	3.03	1 200mm	3 000mm
* 326/6360F	50/80/40/20	45	75	4,0	2,0	2.06		
* 341/6355H	30/80/45/25	30	80	4,5	2,5	4.32		
* 344/6320C	25/50/30/16	25	50	3,0	1,6	2.34		
* 345/6320K	25/50/100/30	25	50	10,0	3,0	14.10		
* 346A/6320G	25/50/30/30	25	50	3,0	3,0	4.39		
* 346/6320H	25/50/45/30	25	50	4,5	3,0	6.42		
* 348/6320E	25/50/45/25	25	50	4,5	2,5	5.16		
* 349/6320D	25/50/30/20	25	50	3,0	2,0	2.92		
* 351A/6318H	15/40/30/25	15	40	3,0	2,5	5.60		
* 351/6318G	15/40/30/20	15	40	3,0	2,0	4.36		
* 352/6318F	15/40/30/16	15	40	3,0	1,6	3.48		
* 354/6317F	13/38/25/16	13	38	2,5	1,6	4.18		
* 358/6315F	16/30/30/16	16	30	3,0	1,6	3.92		
* 360/6315E	16/30/25/12	16	30	2,5	1,2	2.94		
* 362/6280E	8/20/20/10	8	20	2,0	1,0	3.13		
* 366U/6275F	8/12.5/10/7	8	12,5	1,0	0,7	1.43		
Perfex ZNT/ 6664F	6/12/14/8	6	12	1,4	0,8	2.92		
6155/6260D	6/15/15/10	6	15	1,5	1,0	3.92		
* 372/6250D	5/10/12/10	5	10	1,2	1,0	3.42		

* Available Ex Stock **Note: All Flatex meshes will be slightly thinner than the thickness specifications shown (approximately 20%) caused by cold rolling the material flat. WE RESERVE THE RIGHT TO CHANGE SPECIFICATION WITHOUT PRIOR NOTIFICATION.**

MENTIS WALKWAY MESHES

INTRODUCTION

FLOREX AND WALKWAY MESH

Heavy-duty type expanded metal with elongated openings and are used principally for light storage floors, narrow walkways, sloping ramps, access walkways for window cleaning purposes in high buildings and in all situations where a safe, non-slip walking surface is important.

Formed like a truss in which every interconnected strand acts as a structural member distributing the load in many directions over a considerable area. The open mesh permits ready passage of light and air. It is virtually self-cleaning and does not allow dust or rubble to accumulate. Oil and water drain off readily. The angular ridges of Florex provide an excellent non-skid, high-traction surface and the material is easily installed by spot-welding or bolting.

It lends itself readily to cutting and shaping with no danger of strands separating.

The range of meshes and thicknesses is given on page 10.

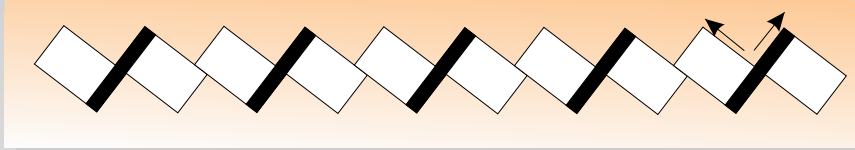
Loading tables for Florex, Walkway Mesh and the heavier Mentex meshes are given on page 10 and should be referred to before selecting materials for Walkways.



MENTIS WALKWAY MESHES

STRENGTH WITH LIGHTNESS:

Examine a cross section of expanded metal. Note that each strand is set at an angle to the plane of the sheet. This continuous angled strand formation gives the material an extremely high strength-to-weight ratio. Every strand performs like a structural member and distributes the load over a substantial area. The multiple ridges of the meshes are closely spaced and provide ample area of contact to provide grip for feet and tyres along the length of the walkway. Of particular importance for external use: water and oil drain off readily and snow and ice break off underfoot, maintaining a sure surface along the length of the walkway under all conditions.



OPEN AREA: The angularity of the strands allows the ready passage of light and air and prevents the accumulation of dust and dirt, making the mesh virtually self cleaning.

CHOICE OF MATERIALS/FINISHES: Mentis expanded metal walkway meshes are available in mild steel, 3CR12, Stainless steel, as well as finishes such as hot dipped galvanizing.

TYPE OF INSTALLATIONS: Mentis walkway meshes are ideal for:

- * Conveyor walkways.
- * Access catwalks.
- * Platforms and general walkways in plants.

Mentex 5 / 489 has been extensively used for walkways at: Kendal Power Station Coal Handling Plant, Sasol 2 & 3 conveyor walkways.

The Direct Reduction Plant at Iscor Vanderbijipark, and Anglo Alpha Uico Plant.

REMOVABLE FIXING DETAILS: GENERAL INFORMATION

The following procedure is recommended:

1. The strands of adjoining sheets should slope in the same direction (see Fig. 1)
2. The flat straight edge of the mesh must be placed upwards. The reverse face of the sheet has curved edges at the intersections (see Fig. 2)
3. The ends of the Mentis mesh should bear on structural supports (see Fig. 2)
4. Adjoining (butting or lapped) sheets can be welded together or a support can be welded beneath the join in the mesh.
5. It is comparatively simple to shape Mentis walkway meshes and to cut holes for pipes or structural members. All cut-outs should be edged with a bar welded at contact points.

Fig 1.

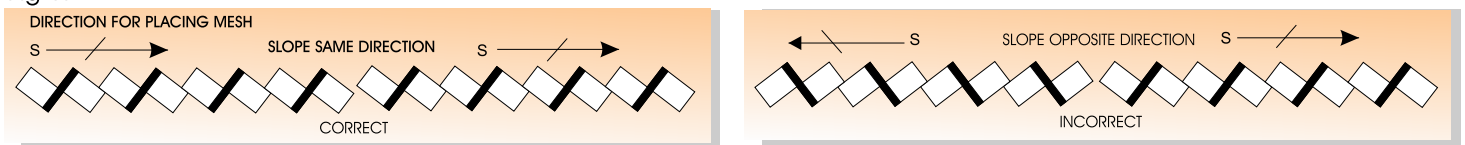
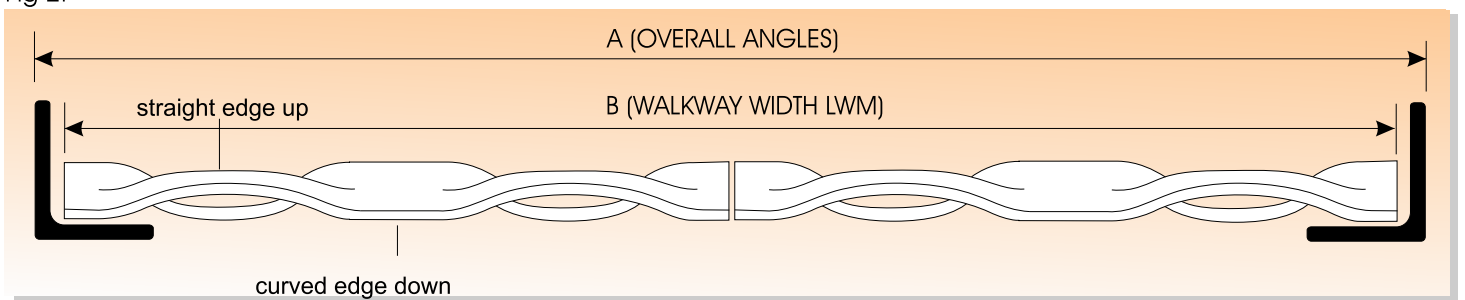


Fig 2.





MENTIS WALKWAY MESHES

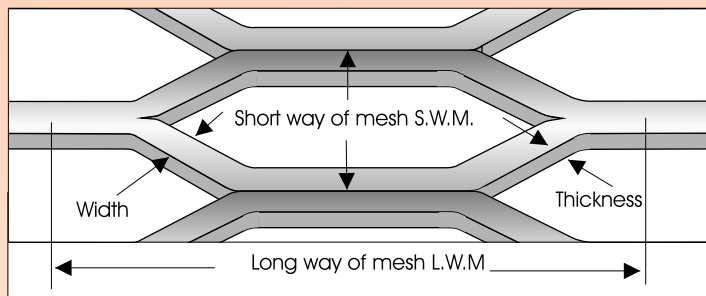
FIXING DETAILS (BANANA CLIP)

An improved clip for fixing sheets of expanded metal walkway mesh direct to structural steelwork has been designed. This consists of an upper saddle engaging over two knuckles of the grating with a screw passing through the saddle and tightening into a lower clamping strip which is notched to engage with the bottom edge of a knuckle. The advantage of this arrangement is that the need to tighten a nut from below is eliminated. With saddle and clamping strip held together by the screw, the end of the clamping strip is worked through the mesh, positioned correctly and the screw tightened. Recommended distance between clip fixings is 750mm.

WELDING IN SITU

Mentis Expanded Metal Walkway Meshes can be welded to the supporting structure by using either the overlap or butt-join system. It is recommended that a minimum of each fourth stag be welded to the support. Adjoining (butting or lapped) sheets can be welded together, or a support can be welded beneath the join in the mesh.

HOW TO IDENTIFY YOUR MESH



L. W. M = LONGWAY OF MESH.

This measurement is the size across the longway of the diamond mesh from centre to centre of joints.

S.W.M = SHORTWAY OF MESH.

This is the size measured across the shortway of the diamond mesh from centre to centre of joints.

THICKNESS OF STRAND

= The thickness (gauge) of the sheet before expanding.

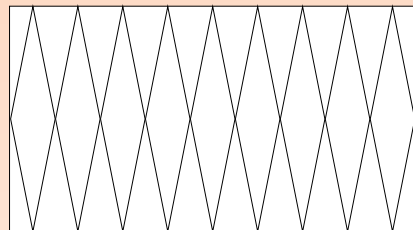
WIDTH OF STRAND

= The size of the strand measured at right angles to its thickness.

STRAND THICKNESS: Subject to mill tolerance. (i.e. Mittal)
Except for flattened types which shall be at least equal to the nominal original thickness of the material of manufacture within 20%, measured at the knuckle.

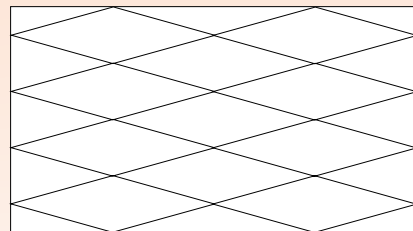
HOW TO SPECIFY YOUR SHEET SIZE:

Size of sheet L.W.M. This is the dimension of a sheet measured in line with the longway of the diamonds, and should always be the first dimension quoted.



This sheet is
1 200 mm L.W.M.
X 2400 S.W.M.

Size of sheet S.W.M. This is the dimension of a sheet measured across the shortway of the diamonds, and should always be the second dimension quoted.



This sheet is
2 400 mm L.W.M.
x 1 200 S.W.M.

WHEN ORDERING PLEASE STATE:

1. Number of sheets required.
2. Size of sheet required (L.W.M. first).
3. Reference number of mesh.



MENTIS WALKWAY MESHES



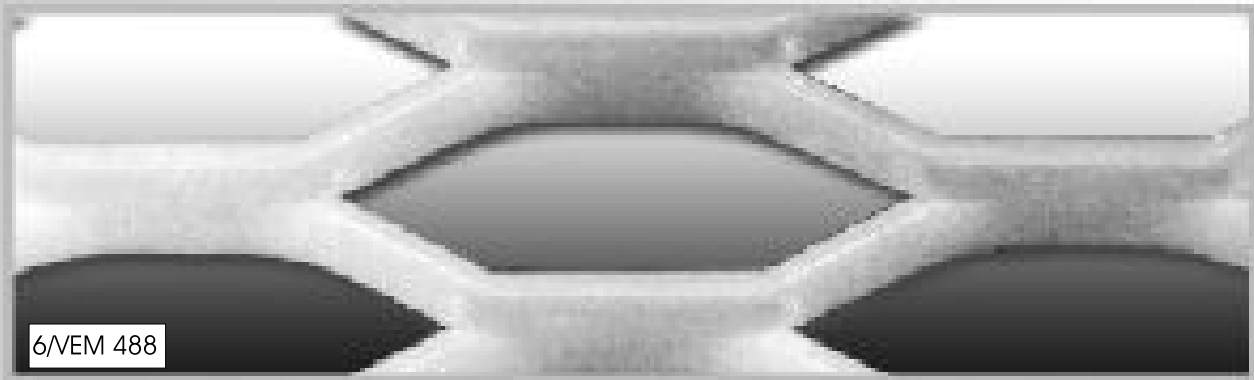
8/VEM 486

35 SWM X 120 LWM X 6,0mm width x 4.5 mm thick strand



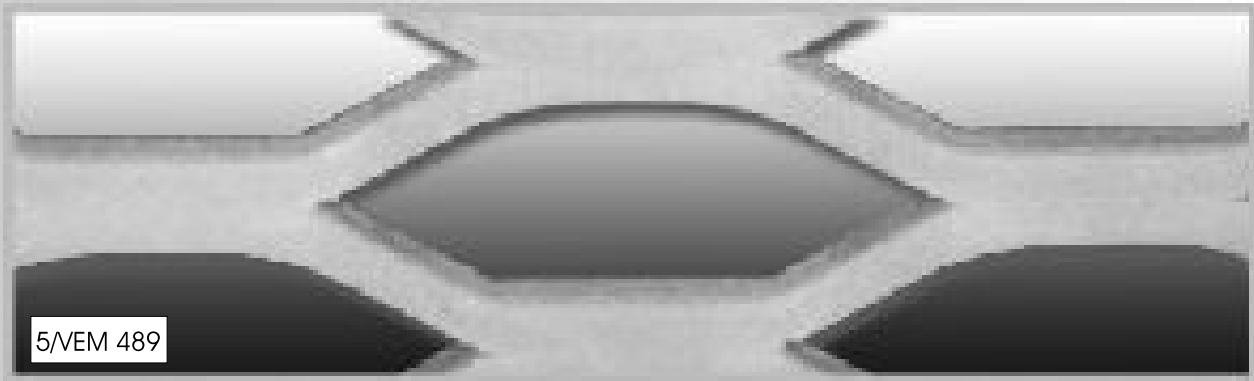
7/VEM 487

35 SWM X 120 LWM X 8,0mm width x 4.5mm thick strand



6/VEM 488

35 SWM X 120 LWM X 10,0mm width x 4.5mm thick strand



5/VEM 489

35 SWM X 120 LWM X 10,0mm width x 6.0mm thick strand

ILLUSTRATIONS ARE NOT NECESSARILY ACTUAL SIZE.



MENTIS WALKWAY MESHES

Walkway Meshes (Available to Order)

Ref.No	Metric Designation B A C D	Nominal size of diamonds centre to centre of strands		Nominal dimensions of strands		Mass kg. per m ²	Shown below are various standard sheet widths (Longway of mesh) which are available to order and can be manufactured with no extra machining costs, mm	Maximum lengths (Shortway of mesh) available to order for different types of MENTEX
		SWM or width for B in mm (see sketch)	LWM or length for A in mm (see sketch)	C Width in mm	D Thickness in mm			
* 38/484	40/140/60/45	40	140	6,0	4,5	10.07	1 200mm	3 000mm
36/485	40/140/100/45	40	140	10,0	4,5	15.90	1 200mm	3 000mm
* 8/486	35/120/60/45	35	120	6,0	4,5	10.79	1 200mm	3 000mm
* 7/487	35/120/80/45	35	120	8,0	4,5	14.38		
* 6/488	35/120/100/45	35	120	10,0	4,5	17.98		
* 5/489	35/120/100/60	35	120	10,0	6,0	22.48		

* Available Ex Stock

WE RESERVE THE RIGHT TO CHANGE SPECIFICATION WITHOUT PRIOR NOTIFICATION.

LOADING TABLES FOR FLOREX, MENTEX AND WALKWAY MESHES

Reference No		Span				
		600mm	750mm	900mm	1000mm	1200mm
<u>Florex:</u>	1/300D	1 165		520	420	290
<u>Walkway:</u>						
	38/484	695		300	250	175
	36/485	900		400	330	230
	8/486	500	350	225	150	
	7/487	765	500	350	225	
	6/488	900	765	500	350	
	5/489	1 050	900	765	500	
<u>Mentex:</u>						
	41	1 305		580	470	325
	42	1 027		460	370	260
	43	555		250	200	140
	60	835		370	300	210
	70	860		380	310	215

These tables are based on tests done by National Mechanical Engineering Research Institute (C.S.I.R.). The loads given are half the distributed load (kg/m²) at the limit of proportionality and may be regarded as safe loads for non-cyclical loads. Deflections produced at these loads are about 25mm in the case of 1 metre span. The mesh was simply supported in the test, but by welding the mesh to the supports, higher loads may be applied.