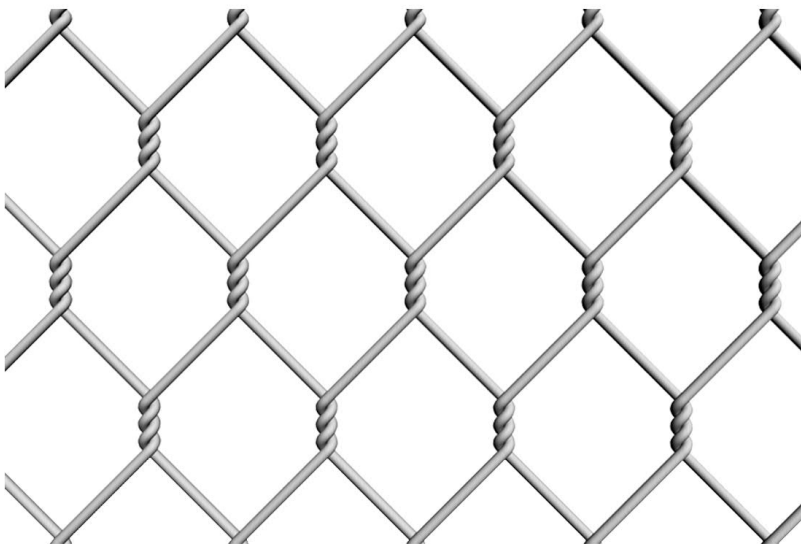


Double-Twisted Hexagonal Mesh Gabions and Revent Mattresses Introduction

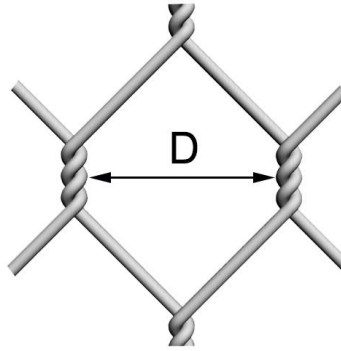
Gabions Box
Gabions baskets
Revent Mattresses
Sack gabions
Double twist hexagona netting

** Custom sizes available on request*



2.70mm WIRE DIAMETER – ZINC COATED

The tolerance on the opening of mesh 'D' being the distance between the axis of two consecutive twists, is according to EN 10233 and ASTM A975-97



SPECIFIED MESH DOUBLE TWIST WOVEN
Nominal dimension(D): Gabions: 80mm and 100mm; Mattresses: 60mm and 80mm

The certification, materials, manufacture, assembly and installation of the above-mentioned product shall comply with all of the following criteria:

Certification

All gabions must be certified in accordance with EN10223-3 and ASTM A975 requirements for current General Building Regulations. The durability of the zinc coating is fully dependant upon the conditions prevailing on site. Evidence of current SGS certification and relevant certificates of conformity with respect to wire strength and coating weights used in the manufacture of the mesh fabric and wire products are to be issued upon request.

Materials

The wire used in the manufacture of the gabions and installation accessories shall comply with the following:

Mesh Fabric

The mesh fabric shall be formed by twisting pairs of wires through one and a half turns to form a hexagonal flexible net pattern of nominal size 80mm x 100mm. The end wires of the mesh panel are terminated by being wrapped around a heavy selvedge wire. The nominal wire diameter for the mesh fabric shall be 2.70mm and 3.40mm for the selvedge wire. All wire is in accordance with BS EN 10218-2: 1997 and BS EN 10223-3: 1998 with an ultimate tensile strength of between 350 to 500N/mm² and with a minimum elongation at failure of 10% on a gauge length of 250mm and from rods complying with BS EN 10016-1: 1995 and BS EN 10016-2: 1995.

Lacing Wire

The lacing wire used for site assembly shall be of a nominal 2.2mm wire diameter in accordance with BS EN 10218-2:1997 and shall have a tensile strength that falls within a range of 380 to 550 N/mm².

Corrosion Resistance

All wire used in the gabion production or accessories shall be Zinc coated in accordance with BS EN 10244-2: 2009 (Class A).

Manufacture

Unit Formation

The gabion is to be formed from mesh panels so that the front, rear, base and lid is formed from one continuous sheet, such that the front and rear faces have the mesh orientated vertically.

Diaphragms (partitioning panels) and end panels (vertically orientated mesh) are connected to the base panel with full-length spirals. This process must be undertaken in a factory-controlled environment. The supply of loose diaphragm panels for fitting on site is not acceptable. Diaphragm spacing's should not exceed 1.00m on units orientated as stretchers and 1.5m orientated as headers.

Gabion Sizes

It should be noted that it is industry standard for gabions to be quoted as overall nominal sizes. Due to the flexibility of the mesh fabric, actual sizing may vary from that quoted.

Assembly and Installation

Note Please also refer to manufacturer's installation instructions which are available upon request in either electronic or hard copy format.

Jointing

Gabions are supplied with lacing wire as standard for jointing adjacent units whilst empty as well as for internal windlass ties. Lacing is to be continuous along all joints both vertically and horizontally using alternate single and double twists at a maximum spacing of 100mm ensuring that it forms a tight joint. Start or termination of lacing is formed by three turns ensuring the free end is turned into the unit.

If CL50 'C' rings are to be used for final jointing as an alternative to lacing wire, then these must be installed at every other mesh opening to achieve the required joint strength along all vertical and horizontal courses.

Internal Bracing

Internal bracing is formed by creating a continuous windlass tie between the face and rear of the exposed cells within the structure. On 1m high units, two internal windlass bracings are required at third widths and at each third height of the gabion. For 0.5m high units one internal windlass bracing is required at mid height. In all cases the windlass tie is to span two or three mesh openings on the front and rear cells to spread the load. The exposed end gabions to the wall should also be braced in both directions to prevent end face deformation.

Where gabions are to be pre-filled and lifted instead of filling in situ, it is necessary to brace each cell in both directions. In such circumstances the manufacturer must be consulted prior to supply to ensure product is suitable for application.

Geo-textile Separators

Where a geo-textile separator between the rear of the gabion and backfill is to be used, refer to the engineers design proposal and specification.

Foundations, Wall Inclinations, Face Configurations, Drainage and Backfilling
Reference to the engineers design proposal must be made with respect to foundation requirements, wall inclination, face configuration (stepped, flush or combination thereof), drainage and backfilling requirements. Any soft areas in the sub grade should be excavated and replaced with a granular material to the engineer's requirements.

Filling

Units are to be filled with a hard, durable, non-frost susceptible rock, stone or clean crushed concrete as specified by design. The grading of the fill is to be 100 to 150mm or 100 to 200mm (6G). Where dual fills of the same grading are specified, temporary formwork may be required within the cells as a separator although care must be taken upon removal to ensure no settlement of the fill.

Once adjacent gabions are laced vertically to one another they must be suitably tensioned prior to filling in layers not exceeding 330mm. The tensioning shall not be released until the units are full.

If large voids are present then the stone must be re-orientated to minimise voids and where specified the gabions are to have a hand placed front face.

The units shall be overfilled by 50mm such that the mesh lid bears down onto the gabion filling material. It may be beneficial to blind the top of the filled unit with a 20 to 50mm aggregate. Filling should be staged so that no adjacent cells have more than a third difference in the level of filling for 1m high units or half height in the case of half metre units.

To assist in maintaining face alignment and reduce deformation, the use of external formwork i.e. timber or scaffold tubes can be tied onto the external face of the structure at third heights and then removed upon completion.