

TerraLink™

Twisted Wire Mesh Gabions & Mattresses

Welded Wire Mesh Gabions

Data Sheet's Index

Page No.	TerraLink™ Products
2	TerraLink™ Twisted Mesh Gabions & Mattresses Specification
3	TerraLink™ Twisted Mesh Gabion & Mattress Assembly / Construction Details
5	TerraLink™ Welded Mesh Gabions

TerraLink™ Double Twist Mesh Gabions

Bezinal® 2000 90% Zinc + 10% Al. / Pvc GabionS and Mattresses

TerraLink™ gabions and mattresses are now available with the new “BEZINAL® 2000 10% Zinc + 10% Aluminium” coated wire, the new generation long life alloy coating offering double the protection than the commonly available 95% Zinc + 5% AL coating systems.

TerraLink™ PVC gabions and mattresses manufactured using the new “BEZINAL® 2000 95% Zinc + 10% Aluminium” plus PVC wire and are ideally suited to more demanding environments.

TerraLink™ double twist woven mesh gabions are ideal for accommodating differential settlement, and will not unravel or unzip when exposed to extreme loads or when wires within the mesh are cut or damaged.

Product Data	
Gabions : Bezinal® 2000 + Pvc Coating : Double Twist Hexagonal Mesh	
Mesh Type	80 x 100mm
Mesh wire diameter	2.70mm + PVC : Zinc Al coating 245g/m ²
Selvedge wire diameter	3.40mm + PVC : Zinc Al coating 265g/m ²
Lacing wire diameter	2.20mm + PVC : Zinc Al coating 244g/m ²
Tensile strength range	51 Kg/mm ²
Wire Coating	Bezinal® 2000 90% Zinc +10% Aluminum PVC 0.50mm nominal thickness
Mattresses : Bezinal® 2000 + Pvc Coating : Double Twist Hexagonal Mesh	
Mesh Type	60 x 80mm
Mesh wire diameter	2.20 mm + PVC : Zinc Al coating 244g/m ²
Selvedge wire diameter	2.70 mm + PVC : Zinc Al coating 245g/m ²
Lacing wire	2.20 mm + PVC : Zinc Al coating 244g/m ²
Tensile strength range	51 Kg/mm ²
Wire Coating	Bezinal® 2000 90% Zinc +10% Aluminum PVC 0.50mm nominal thickness
Gabions : Bezinal® 2000 Coating : Double Twist Hexagonal Mesh	
Mesh Type	80 x 100mm
Mesh wire diameter	2.70 mm : Zinc Al coating 245g/m ²
Selvedge wire diameter	3.40 mm : Zinc Al coating 265g/m ²
Lacing wire diameter	2.20 mm : Zinc Al coating 244g/m ²
Tensile strength range	51 Kg/mm ²
Wire Coating	Bezinal® 2000 90% Zinc +10% Aluminum
Mattresses : Bezinal® 2000 Coating : Double Twist Hexagonal Mesh	
Mesh Type	60 x 80mm
Mesh wire diameter	2.20 mm : Zinc Al coating 244g/m ²
Selvedge wire diameter	2.70 mm : Zinc Al coating 245g/m ²
Lacing wire	2.20 mm : Zinc Al coating 244g/m ²
Tensile strength range	51 Kg/mm ²
Wire Coating	Bezinal® 2000 90% Zinc +10% Aluminum
Stock Sizes	
Gabions : Other sizes available indent only	2x1x1m 1x1x1m 2x1x0.5m
Mattresses : Other sizes available indent only	6x2x0.3m 3x2x0.23m
Rockfall mesh available indent only	Bezinal® 2000 2.7mm wire double twist mesh 80mm x 100mm Roll size 2m x 50m

Note

- Materials used in the manufacture of TerraLink™ products comply with relevant ASTM / EN standards.
- The fabrication / tolerances of TerraLink™ products comply with relevant ASTM / EN standards.
- All materials used in the manufacture of TerraLink™ assembly consumables comply with relevant ASTM / EN standards.

Assembly Consumables

Lacing wire supplied with all gabions at the rate of 5% by weight and mattresses 2% by weight

Lacing wire coating type to match gabion / mattress.

Pre-formed internal brace wires available to match gabion.

50mm stainless steel 'C' ring gun (pneumatic and manual) available for hire as an alternative method to lacing the gabion / mattress margins and diaphragms,

Typically allow 90 “C” rings for 2x1x1m gabion and 80 “C” rings for 6 x 2 x 0.3m mattress. Maximum “C” ring spacing 100mm.

TerraLink™ Twisted Wire Gabion / Mattress

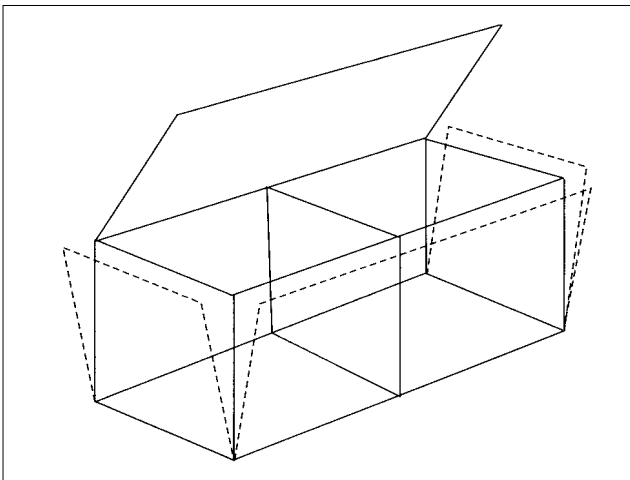
Assembly and Construction Details

1.0 General

Typical manpower requirements for the assembly and erection of gabions are a leading hand, three labourers and a plant operator. The plant requirements are generally a small to medium sized excavator.

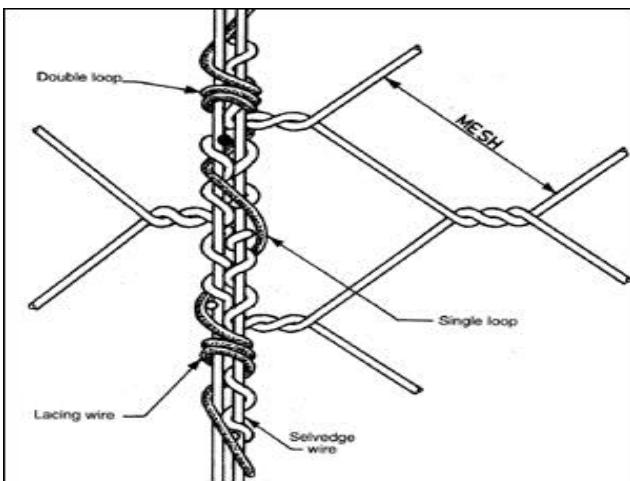
1.1 Assembly

Unpack the gabion and unfold it on a firm surface. Stretch the gabion and stamp any kinks from the mesh.



Assemble each gabion individually by raising the sides, ends and diaphragms as shown above. Ensure that all creases are in the correct positions and that the tops of all four sides are at an even height.

First lace the four corners of the gabion, then the diaphragms to the sides. Always begin lacing at the top,



twisting the end of the lacing wire around the selvages, then lacing around the two edges being joined, using a double tie through each mesh in turn, and tie off securely at the bottom, see sketch above.

Turn the ends of all lacing wire to the inside of the gabions on completion.

1.2 Erection

Position the assembled gabion on the structure. Secure the end or side from which work is to proceed either by

lacing to already completed work or to stakes driven into the ground at the corners. These stakes must reach at least the top of the gabion and be braced before tensioning them.

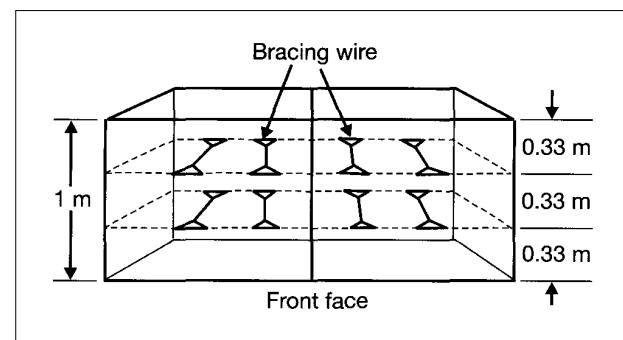
1.3 Tensioning

Before tensioning can commence all edges (top, bottom and sides) of the row of must be laced together.

1.4 Filling

Fill with durable rock. The size of the rock should vary from a maximum of 250 mm diameter and should be reasonably well graded down to 100 mm diameter with not more than 10% material by mass smaller than 100 mm diameter.

Where correct size material is limited, the engineer may approve the use of smaller material in the central 50% of the cross sectional area of each gabion, with correct sized material on the outer faces.



Provide internal horizontal bracing wire at 0.33 m vertical centres in 1 m deep gabions, at the ratio of four wires per cubic metre, see sketch above.

These bracing wires should be wrapped around two mesh wires at the front and back faces, and should be positioned and tensioned to ensure a neat face and line free of excessive bulges and depressions. Fill the gabions in stages and insert bracing wires as filling is brought up. Overfill the gabion by 20 to 50mm above the top to allow for subsequent settlement.

Where required to achieve a neat outer face, a timber form may be used. Once the gabions are tensioned the timber form can be positioned against the gabion and fixed into position. The outer face of the gabion should be carefully hand packed with selected stone and then the timber form removed.

Release tension on the gabion only when it is sufficiently full to prevent the mesh from slackening.

1.5 Final wiring

Close and wire down the lid as soon as practicable after filling.

Stretch the lid tight over the fill using bars or a closing tool and wire down securely through each mesh along all edges, ends and diaphragms. Turn the ends of all lacing and bracing wires into the gabion on completion. Alternatively use 50mm stainless steel 'C' rings at 100mm centres maximum in lieu of lacing

1.6 Cutting and folding mesh

Where shown on the drawings, cut, fold and wire together gabion mesh to form mitre joints or non-rectangular shapes. The mesh must be cleanly cut, and the surplus mesh cut out or folded back and neatly wired to an adjacent face. Lace the cut edge of the mesh securely together with binding wire through each mesh.

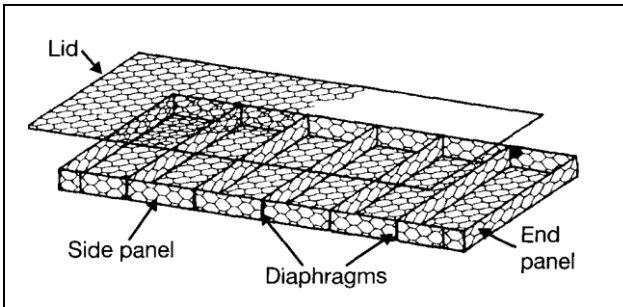
INSTRUCTIONS FOR THE ASSEMBLY AND ERECTION OF MATTRESSES

2.0 General

The assembly and erection of mattresses requires the same manpower and plant requirements as described in the gabion section above.

2.1 Assembly

Unpack the mattress and unfold it on a firm flat surface. Stretch the mattress and remove any kinks from the mesh.



Assemble each mattress individually by raising the sides, ends and diaphragms. The various elements of a mattress are shown in sketch above.

Hold the diaphragms temporarily in the vertical position by tying the selvage wire projecting from the top edge of the diaphragm around the top of the long sides. Starting from the top, use binding wire to lace the four corners of the mattress through each mesh and tie securely at the bottom.

Commence from the top using binding wire to lace the ends of each diaphragm to the sides of the mattress. Lace through each mesh and tie securely as shown in the gabion section above.

Alternatively use 50mm stainless steel 'C' rings at 100mm centres maximum in lieu of lacing

Turn the ends of all lacing wires to the inside of the mattress on completion.

Mattresses should be placed and wired together when still empty as it is difficult to wire mattresses together when both are full of stone.

2.2 Erection

Position / orientate the assembled mattress as detailed on the contract drawings. Lace along all edges (top, bottom and corners) to all adjacent mattresses.

2.3 Filling

Fill with hard durable rock generally between 75 mm and 100mm, preferably a maximum of two-thirds of the mattress. Mattresses require the same manpower and plant requirements as that for gabions.

Wire down the lid as soon as practicable after filling.

2.4 Final wiring

Stretch the lid tight using bars and wire down securely through each mesh along all sides, ends and diaphragms.

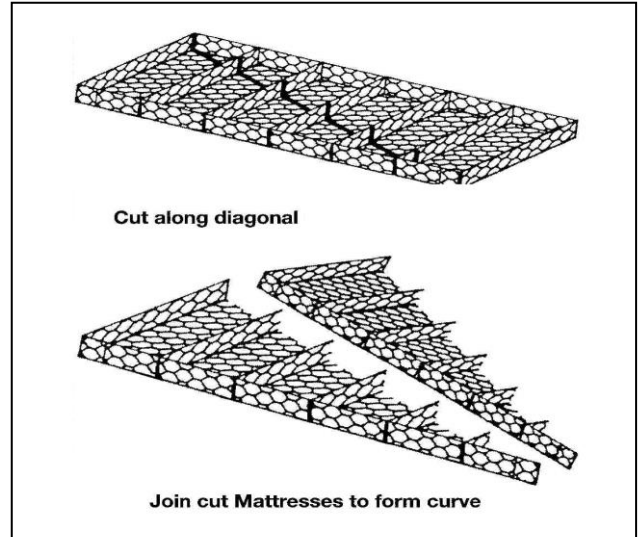
Turn the ends of all lacing wires into the mattress on completion.

2.5 Cutting and folding mattress mesh

It is often necessary to shorten mattresses to fit the structure being built by cutting off a number of compartments. This should be carried out at the locations of the diaphragms to ensure the integrity of the Mattress is maintained.

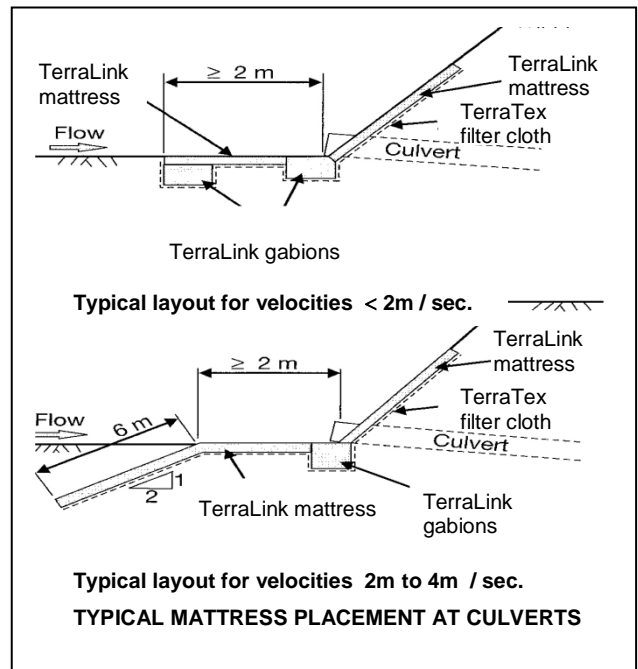
Mattresses can be cut and folded to form mitre joints and non-rectangular shapes. The mesh must be cleanly cut, and the surplus mesh cut out or folded back and neatly wired to an adjacent Mattress face.

Lace the cut edge of the mesh securely together with binding wire through each mesh.



Mattresses can also be cut and folded to form difficult curves. One such technique is shown in the sketch above where the mattress is cut diagonally to form two triangular sections that can be wired together to form a curve.

To modify the curve of whole mattresses triangular sections can be placed between the whole mattresses.



TerraLink™ Welded Mesh Gabions

Product Description

- TerraLink™ welded mesh gabions consist of welded steel mesh panels assembled with helical connectors / hinges, and supplied as a collapsed flat package.
- Completion of the 'on site' assembly is achieved by way of helical connectors, lacing wire or stainless steel 'C' rings.
- TerraLink™ welded mesh gabions can be filled with an aggregate of choice.

Applications

- Architectural features, barriers and fences
- Architectural wall facings
- Gravity retaining walls
- River bank erosion protection River training walls
- Coastal erosion protection
- Bund construction

Features And Benefits

- Robust strong construction.
- Effective durable and proven concept in all applications
- Light in weight and easily man handled
- Long life hot dip galvanizing
- Rapidly deployed
- Stronger than standard twisted wire gabions
- Clean linear lines, holds shape
- Un-trained labour can be employed for erection
- No specialist tools required.
- New Zealand made

TerraLink Welded Mesh Gabion Sizes

Type	A	B	C	D	E	F	G
Width	500	1000	1000	1000	2000	2000	2000
Depth	500	500	1000	1000	500	1000	1000
Height	500	500	500	1000	500	500	1000

TerraLink™ Gabion Materials

Mesh :

Welded steel grid 75mm x 75mm apertures
 Wire 4mm diameter
 Finish: Hot dip galvanized

Helical Connector / Hinge and stiffener wires

3mm diameter hard wire
 Finish same as mesh

Finish:

Hot dip galvanized
 Raw steel
 Powder coat on hot dip galvanizing

