



Global Synthetics
Australian Company – Global Expertise

LINKWELD® WELDED GABIONS FOR ARCHITECTURAL APPLICATIONS

- RETAINING STRUCTURES
- FEATURE WALL CLADDINGS
- SOUND AND SCREEN WALLS
- SEATING
- LANDSCAPE FEATURES

and many other applications which seek the beauty of natural stone harnessed by the strength of a steel cage.



Global Synthetics is a leading supplier of gabion technology to the Australian, New Zealand and South Pacific markets. We offer our clients a diverse range of gabion products including double twist gabions, welded mesh gabions, gabion design literature and design assistance for your next project. Our staff have a combined gabion design and construction experience of well in excess of 130 years.



The LINKWELD® difference

Manufacturing Excellence

All LINKWELD® gabions are manufactured from steel rod that is then drawn down to the appropriate diameter for use in our products. We can supply product with wire diameters ranging from 2mm to 5mm. All wire conforms to international standards for tensile strength and tolerances.

The wire is then coated in our factory with either a heavy zinc or Galfan® protection that meets international standards for both consistency and quality of such coatings. If required, we can additionally coat the product with an organic PVC for additional protection, in a range of colours.

The wire is welded into appropriate panel sizes to produce the LINKWELD® gabion.

Quality Control

All LINKWELD® gabions are manufactured in our ISO 9001 accredited factories so that each time you order you know exactly that your product will meet our published specifications.



Performance

All LINKWELD® gabions come with assessments of design life performance. We want to know that our product will give you many years of satisfactory service. Should you require full details of our certification please contact Global Synthetics for your copy. It is reassuring when the BBA organisation indicates 120 year service life for LINKWELD® gabions, under stated conditions.

BBA Certificate No. 05/4215 refers.



British Board of Agreement

What we offer

We offer a large range of wire diameters, mesh openings and coating types in the LINKWELD® gabion range.

If your project can allow the time required to manufacture against your design preference for a specific application, then we can almost do the impossible. We can offer a very large range of sizes and coating types. If you had curved walls in mind or a special gabion size to suit a specific application then we can help you. Even down to a particular colour for our polymer coated finishes, then we are happy to assist.

Our standard stock sizes

We have used our experience to stock the most commonly requested sizes for our customers which gives them the greatest flexibility in building their structure, combined with efficient and speedy delivery to the job site. Additionally, we have chosen mesh opening and wire diameter combinations that we believe will give you the most economical strength combination whilst allowing you to maintain crisp structural lines and form in your LINKWELD® structure.

Global Synthetics offices and warehouses are located throughout Australia.

LINKWELD® BOX SIZE - (m) L x W x H	MESH OPENINGS - (mm) AVAILABLE	WIRE DIAMETER - (mm) & COATING TYPE
1.0 x 1.0 x (0.5 or 1.0)	100 x 50	<ul style="list-style-type: none"> Wire Diameter choice is: 4.00mm Available with coating: Galfan® Zn 5%Al- Coating
2 x 0.5 x 1.0	<p>Note: For convention the first measurement is the horizontal mesh opening and the second measurement is the vertical mesh opening. This may be reversed but must be specified at the time of order.</p>	
2.0 x 1.0 x (0.5 or 1.0)		



“LINKWELD® gabions offer the designer and owner excellence in product manufacture and quality.”



If you have the time¹

LINKWELD® BOX SIZE - (m) L x W x H	MESH OPENINGS - (mm) AVAILABLE	WIRE DIAMETER - (mm) & COATING TYPE
1.0 x 1.0 x (0.5 or 1.0)	25 x 25 50 x 50 75 x 75 100 x 50 100 x 100	<ul style="list-style-type: none"> For mesh opening up to and including 50mm x 50mm, wire diameter choice is: 2.0, 2.20, 2.50, 2.70, 3.00, 4.00 and 5.0mm. N.B. Available with coating options: Heavily Galvanised Coating Galfan® Zn 5%Al- Coating. For mesh opening 75mm x 75mm and up to 100mm x 100mm, wire diameter choice is: 2.50, 2.70, 3.00, 4.00 and 5.0mm. N.B. Available with coating options: Heavily Galvanised Coating Galfan® Zn 5%Al- Coating Heavily Galvanised Coating + Polymer Coated Galfan® Zn 5%Al- Coating + Polymer Coated. (When product is polymer coated the finished coated wire diameter is: 3.0, 3.2, 3.5, 4.8 and 5.8mm.) All mesh now available in 316 Stainless Steel.
2.0 x 0.25 x 0.5		
2.0 x 0.5 x 0.5		
2.0 x 1.0 x (0.5 or 1.0)		
2.0 x 1.5 x (0.5 or 1.0)		
3.0 x 1.0 x (0.5 or 1.0)	Note: For convention the first measurement is the horizontal mesh opening and the second measurement is the vertical mesh opening. This may be reversed but must be specified at the time of order.	
4.0 x 1.0 x (0.5 or 1.0)		

1. Time is generally 6-8 weeks from date of order although we do not guarantee due to fluctuations in factory workload. We will quote a delivery time when you order.
2. Dimensions when using a 75mm opening will alter the overall length and height of units quoted. Speak to Global Synthetics at time of order.

What else do I need to consider?

LINKWELD® gabions are supplied flat packed and are assembled on site using LINKWELD® lacing wire or LINKWELD® spiral joiners. Sometimes if the project is significant in size, you may wish to use LINKWELD® "C" clips and a pneumatic lacing tool sold or hired by Global Synthetics.

LINKWELD® gabions can be used to construct large retaining structures. You should ensure that you seek the necessary statutory approvals to construct such structures when required. This will mean that you may need to engage a qualified engineer who is familiar with the design of such structures and who will assess site, soil and drainage considerations for your site. Engineering costs are a good investment in the life of your structure.

There are many infill rock types that can enhance the visual appearance of your structure including round river gravel and quarried angular stone such as basalt, limestone or sandstone. Sometimes the use of recycled materials like concrete or brick could be appropriate. It is important that the rock infill supplied to you is compatible with the mesh opening of the LINKWELD® gabion selected. For example, if using the 100mm x 50mm aperture gabion then typically you would require rock with a maximum size of around 150mm and a minimum size of around 75mm, ideally the rock should be graded between such sizes. Although the mass will vary dependent upon the rock type selected, you should allow for some 1.8 tonnes of rock for each cubic metre of LINKWELD® gabions to be constructed.

Dependent upon the shape of your structure, the number of panels required can vary. LINKWELD® gabions are modular units that consist of a number of elements.

End Panels

Base Panels

Top Panels

Side Panels

Bracing Wires

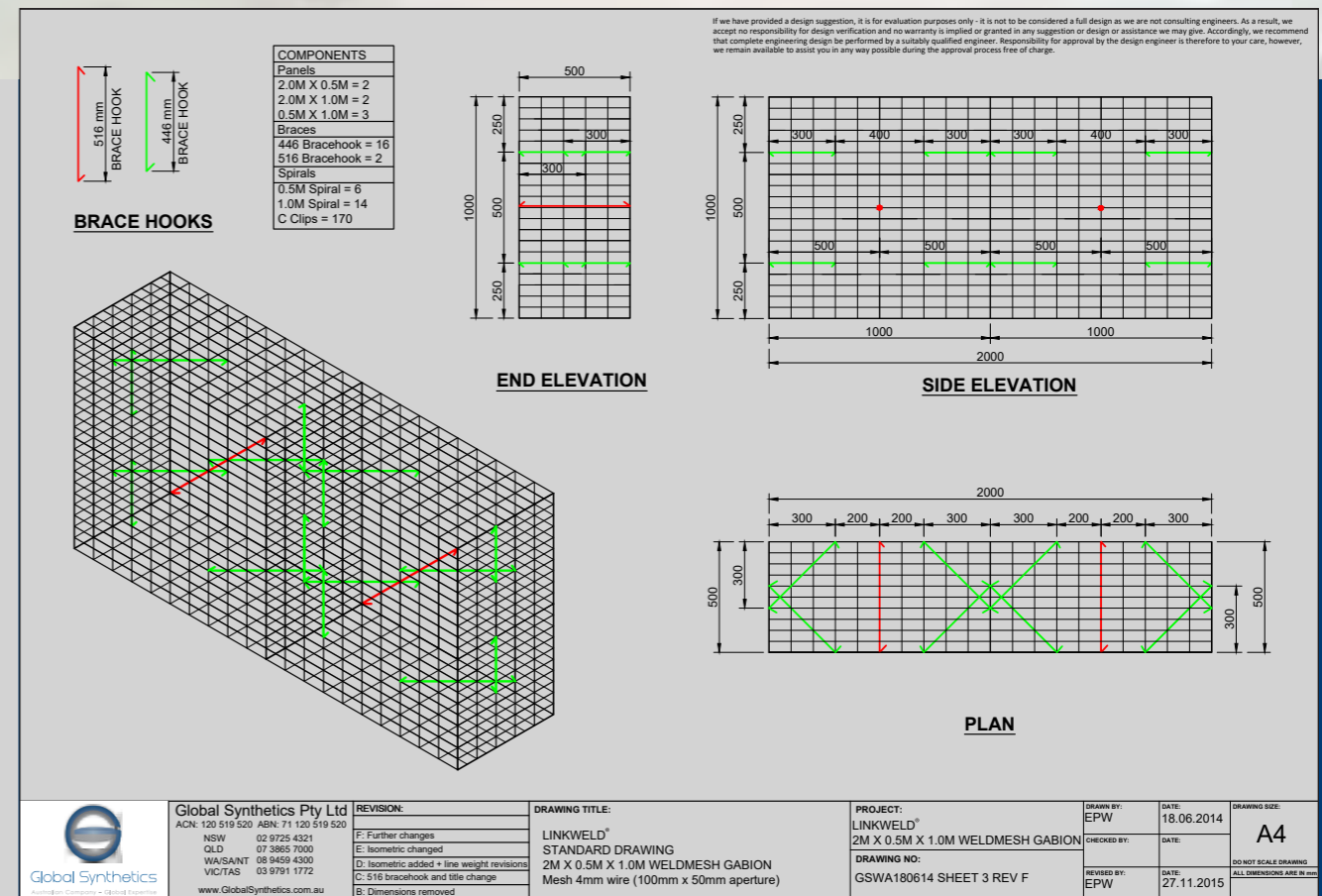
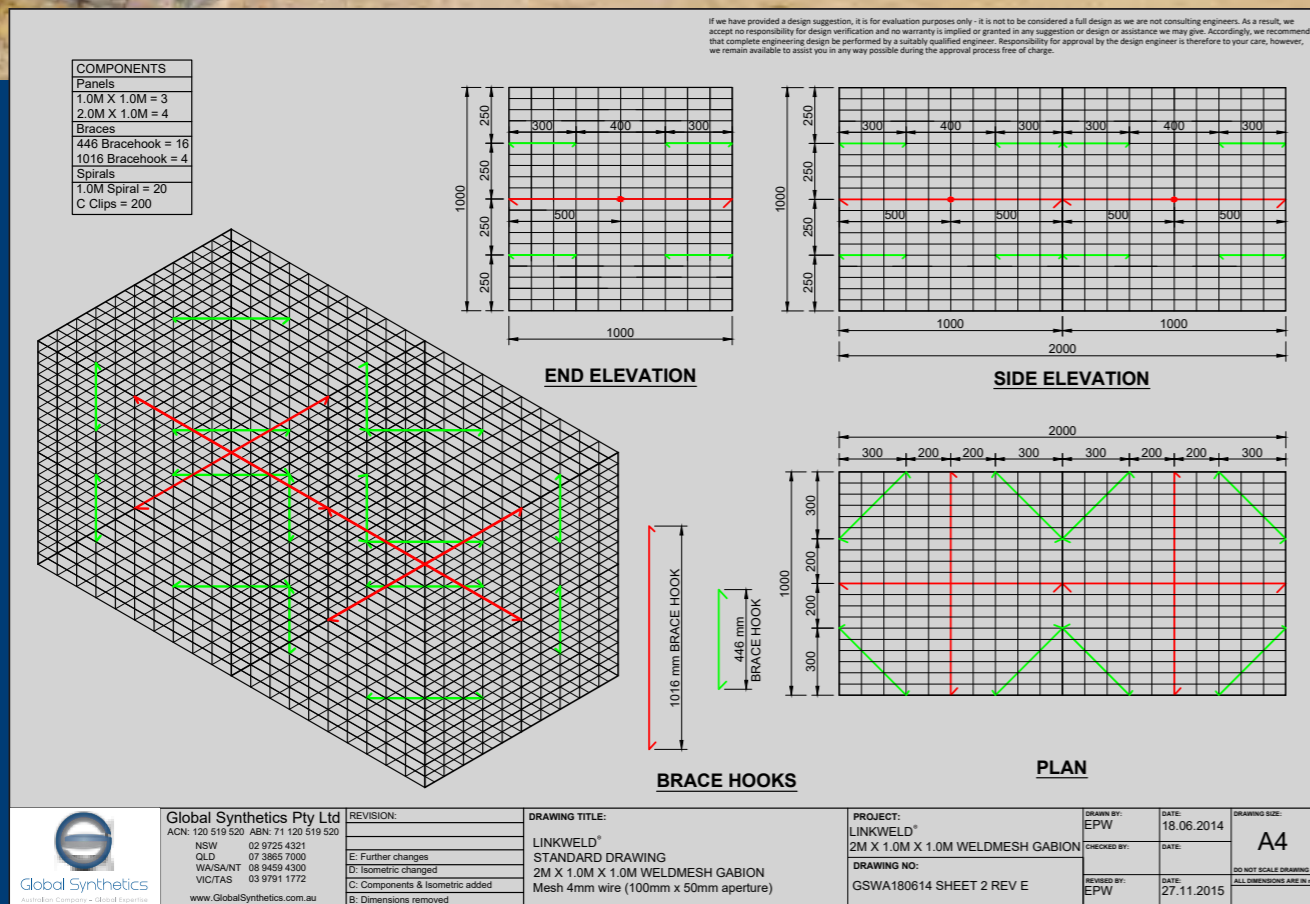
Diaphragm Panels*

Spirals or lacing wire or "C" clips

*for units that are 2m in length or greater, additional panels called diaphragm panels are placed at 1m spacing's along the units, giving greater internal stability.



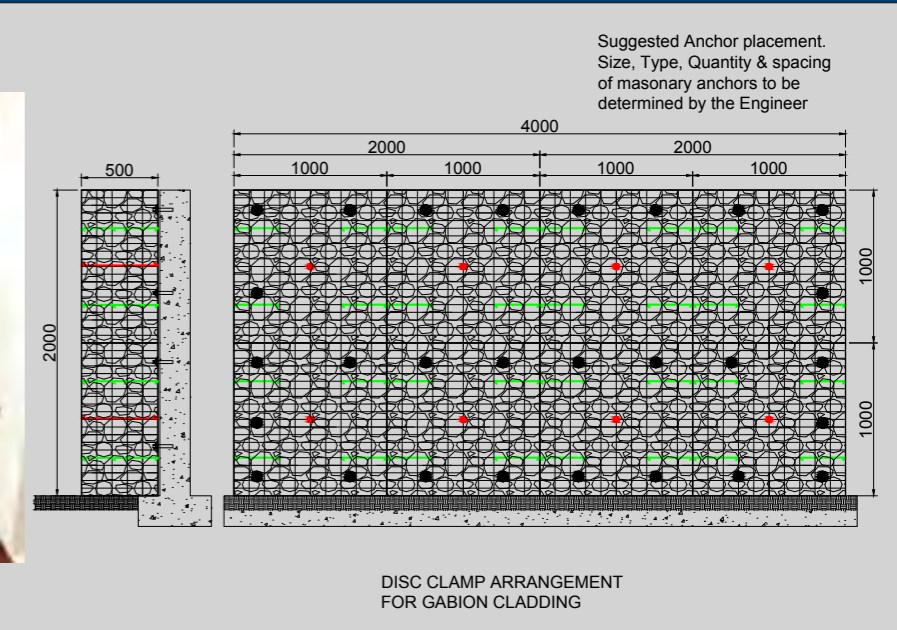
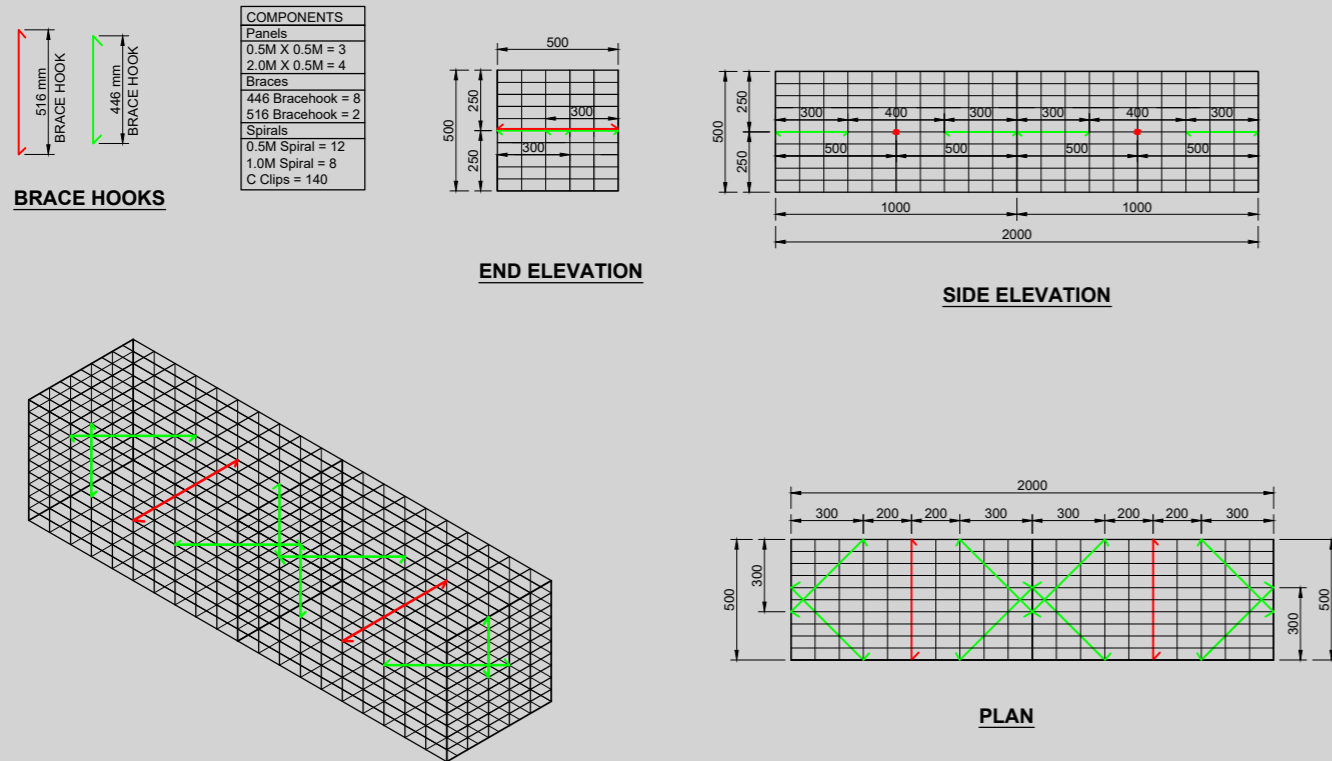
Typical LINKWELD® Construction Configuration



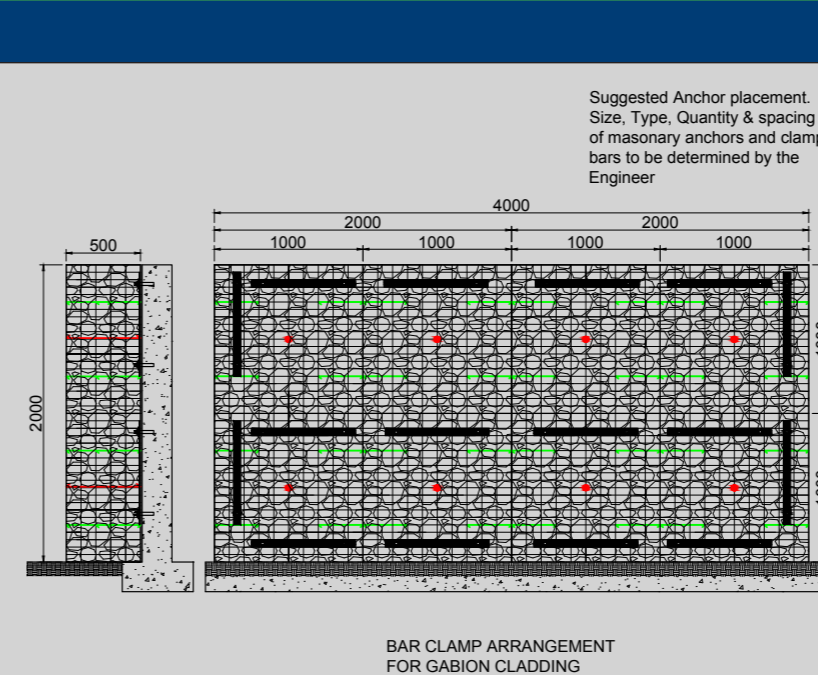
LINKWELD® for Seating

LINKWELD® Cladding Options

If we have provided a design suggestion, it is for evaluation purposes only - it is not to be considered a full design as we are not consulting engineers. As a result, we accept no responsibility for design verification and no warranty is implied or granted in any suggestion or design or assistance we may give. Accordingly, we recommend that complete engineering design be performed by a suitably qualified engineer. Responsibility for approval by the design engineer is therefore to your care, however, we remain available to assist you in any way possible during the approval process free of charge.



<p>Global Synthetics Pty Ltd ACN: 120 519 520 ABN: 71 120 519 520</p> <p>NSW 02 9725 4321 QLD 07 3885 7000 WA/SANT 08 9459 4300 VIC/TAS 03 9791 1772 www.GlobalSynthetics.com.au</p>	REVISION: E: Further changes D: Isometric changed C: Components & Isometric added B: Dimensions removed	DRAWING TITLE: LINKWELD® STANDARD DRAWING 2M X 0.5M X 0.5M WELDMESH GABION Mesh 4mm wire (100mm x 50mm aperture)	PROJECT: LINKWELD® 2M X 0.5M X 0.5M WELDMESH GABION DRAWING NO: GSWA180614 SHEET 4 REV E	DRAWN BY: EPW CHECKED BY: EPW REVISION BY: EPW	DATE: 18.06.2014 DATE: 27.11.2015	DRAWING SIZE: A4 DO NOT SCALE DRAWING ALL DIMENSIONS ARE IN mm
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When I plan my structure, how do I calculate my LINKWELD® gabion cost?

Can I optimise my purchase?

Panels

LINKWELD® gabions become very efficient when using more than one unit as the adjacent panel of one unit is common to the same panel of the next unit.

For example:

If I require a 2m structure, 0.5m high & 0.5m deep, I would require

2 end panels 0.5m x 0.5m, 2 side panels 2m x 0.5m, 1 top panel 2m x 0.5m and 1 bottom panel 2m x 0.5m and 1 internal diaphragm 0.5m x 0.5m. I would also receive 8 corner bracing wires along with 2 front to back bracing wires and appropriate spiral joiners/c-clips.

If I require a 4m structure, 0.5m high & 0.5m deep, I would require

2 end panels 0.5m x 0.5m, 4 side panels 2m x 0.5m, 2 top panels 2m x 0.5m and 2 bottom panels 2m x 0.5m and 3 internal diaphragms 0.5m x 0.5m. I would also receive 16 corner bracing wires along with 4 front to back bracing wires and appropriate spiral joiners/c-clips.

If I require a 6m structure, 0.5m high & 0.5m deep, I would require

2 end panels 0.5m x 0.5m, 6 side panels 2m x 0.5m, 3 top panels 2m x 0.5m and 3 bottom panels 2m x 0.5m and 5 internal diaphragms 0.5m x 0.5m. I would also receive 24 corner bracing wires along with 6 front to back bracing wires and appropriate spiral joiners/c-clips.

All panels including any diaphragm units are individually supplied for you to join on site.

Bracing wires

Internal bracing wires are supplied as part of your purchase. This gives internal stability when you are filling the gabion. We recommend the following:

When using LINKWELD® gabions that are supplied 1m in height and 1m in length, we will generally supply 8 bracing wires for each compartment of this size. One wire is placed across each gabion corner at a 1/3rd height as filling proceeds. When using LINKWELD® gabions that are supplied 0.5 in height and 1m in width, we will generally supply 4 bracing wires for each compartment of this size. One wire is placed across each gabion corner at 1/2 height as filling proceeds. For special sizes of gabion boxes we shall supply bracing wires to suit.



Typical bracing wire arrangement.

Spiral wires

Included in your purchase price will be spiral lacing wires. The standard pitch will be 25mm and are engineered to provide a continuous connection between all panels. Spirals will generally be supplied in either 0.5m lengths or 1m lengths to suit your order. Some minor on site cutting to specific lengths may be required. Spiral lengths may change for speciality size units.



Diaphragms

When purchasing LINKWELD® gabion units where the length of panels are 2m or greater, we shall include diaphragms in your purchase price which increase the stiffness of your gabion structure and help to maintain the neat and straight lines of the unit. The diaphragm will ensure that the rock is contained in a compartment no longer than 1m in length by the height of the unit ordered. Diaphragms are fixed in place with spirals, "C" clips or approved lacing wire.

"C" clips

Global Synthetics are able to offer at additional purchase cost, a system of mechanically fastening your LINKWELD® gabions. This is achieved using a pneumatic lacing tool (compressor supplied by customer) and specially designed closing clips. You should speak to Global Synthetics, if the size of your project requires such equipment.



Lacing wire

Optional lacing wire is also available as an alternative to spirals or 'c clips'. This will be a 2.2 mm diameter wire and shall be coated to the same coating quality as the units purchased. The method of lacing required should be a single and double loop at each consecutive opening.

Other costs

You will obviously need to allow for additional costs such as rock infill for the gabion, excavation costs, drainage costs and necessary design costs. Dependent upon the structure size and complexity, these costs may vary considerably. You should always be aware that a well designed and well constructed LINKWELD® gabion structure will last for years and can enhance the long term aesthetics of your project.



NEED HELP?

Just ring one of the Global sales staff at an office location closest to you and they will be pleased to assist you in making your selection of the LINKWELD® product.



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More about Global Synthetics

Global Synthetics is a 100% Australian-owned company, proud to offer a complete range of high-quality geosynthetic products backed by over 130 years of combined staff experience in the industry. We have supplied products to some of the largest recent infrastructure works in Australia. Global Synthetics provides major benefits to any geotechnical engineering project with the right products and our technical expertise.

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