

LINKWELD® Gabions

Rigid Welded Mesh Gabion System

Architecturally pleasing straight lines



Product Information

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 3mm to 5mm. All wire conforms to international standards for tensile strength and tolerances. The wire is then coated in our factory with a Galfan® corrosion 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.

LINKWELD® gabions are offered in a variety of wire diameters, mesh openings, coating types and cage sizes to suit the project requirements.

Applications

- Sound walls and screens
- Retaining walls
- Seating
- Feature wall cladding
- Architectural finishes

LINKWELD® Gabions

Benefits

- Ease of construction
- Local stocking to assist in timely deliveries
- Quality product
- Range of wire coating including Galvan® to suit varying environmental conditions
- Wide range of sizes
- BBA Certificate offering known durability
- High tensile wire used for rigidity

Features

- Architectural finishes
- Residential building finishes
- Porous
- Attractive finish



LINKWELD® Gabions

Product Data Sheet

STANDARD STOCK SIZES		
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	• Wire Diameter choice is: 4.00mm • Available with coating: Galfan® Zn 5%Al-Coating
2 x 0.5 x 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.	
2.0 x 1.0 x (0.5 or 1.0)		
CUSTOMIZED STOCK SIZES ⁽¹⁾		
LINKWELD® Box size - (m) L x W x H	Mesh Openings - (mm) Available	Wide Diameter - (mm) & Coating Type
1.0 x 1.0 x (0.5 or 1.0)	25 x 25	• For mesh opening up to and including 50mm x 50mm, wire diameter choice is: 3.00, 4.00 and 5.0mm. N.B. Available with coating options: Heavily Galvanised®Zn 5% Al - Coating • For mesh opening 75mm x 75mm and up to 100mm x 100mm, wire diameter choice is: 3.00, 4.00 and 5.0mm. N.B. Available with • Galfan® Zn 5%Al- Coating • Galfan® Zn 5%Al- Coating + Polymer Coated. (When product is polymer coated the finished coated wire diameter is: 3.5, 4.8 and 5.8mm.) • All mesh now available in 316 Stainless Steel.
2.0 x 0.25 x 0.5	50 x 50	
2.0 x 0.5 x 0.5	75 x 75 ²	
	100 x 50	
	100 x 100	
2.0 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.	
2.0 x 1.5 x (0.5 or 1.0)		
3.0 x 1.5 x (0.5 or 1.0)		
4.0 x 1.5 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.

LINKWELD® Gabions Installation

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 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. Design costs are a good investment in the life of your structure.

The choice of infill rock should consider the most suitable type that is compatible with the design requirements of your structure. There are many infill rock types that can enhance the visual appearance of your structure including round river gravel, quarried angular stone with a range of colours that are exhibited by such rock as basalt, limestone or sandstone. Sometimes the use of recycled materials such as 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 opening 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.



LINKWELD® Gabions Installation

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 required 1 unit of LINKWELD® gabion 2m x 1m x 1m then I would require

2 end panels 1m x 1m, 2 side panels 2m x 1m, 1 top panel 2m x 1m and 1 bottom panel 2m x 1m and 1 internal panel called a diaphragm 1m x 1m. I would also receive 16 bracing wires and appropriate spiral joiners.

If I required 2 units of LINKWELD® gabion each 2m x 1m x 1m to make a 4m long wall then I would require

3 end panels 1m x 1m, 4 side panels 2m x 1m, 2 top panels 2m x 1m and 2 bottom panels 2m x 1m (saving 1 end panel). Also included would be 2 internal panels called diaphragms and 32 bracing wires + appropriate spiral joiners.

If I required 2 units of LINKWELD® gabion each 2m x 1m x 1m to make a wall 2m long and 2m high then I would require

4 end panels 1m x 1m, 4 side panels 2m x 1m, 1 top panel 2m x 1m and 2 bottom panels 2m x 1m (saving 1 top panel 2m x 1m). Also included would be 2 internal panels called diaphragms and 32 bracing wires + appropriate spiral joiners.

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 quantity and will be included in your purchase price.

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.

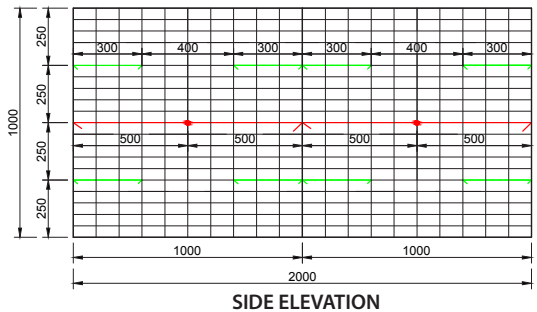
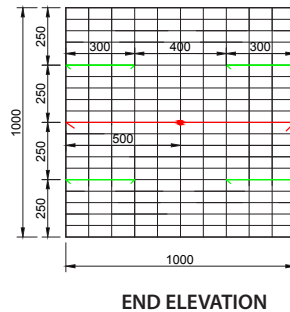
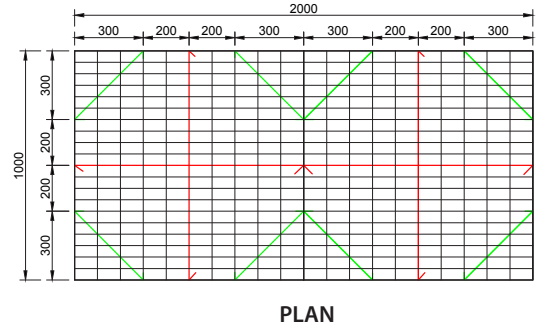
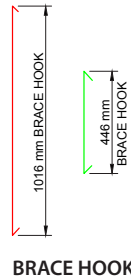
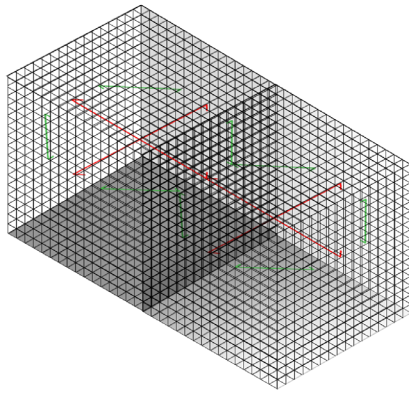


Brace hook wires

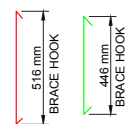
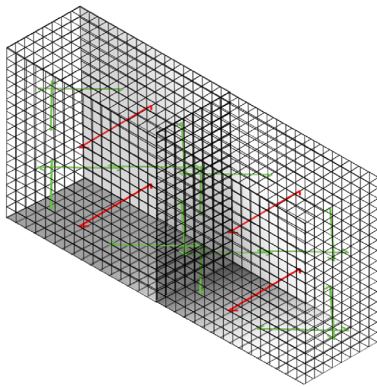
LINKWELD® Gabions Installation

Bracing wire suggested configuration

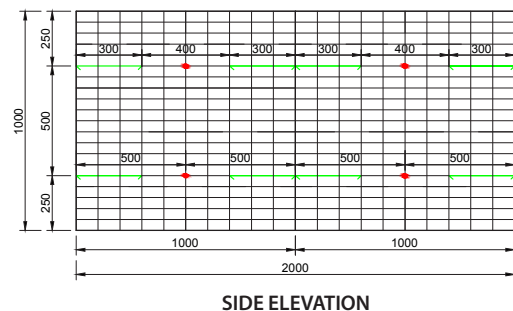
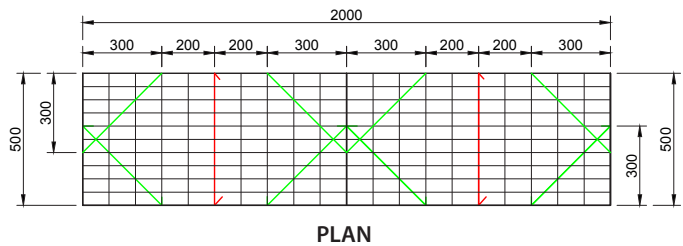
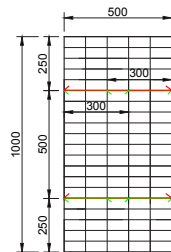
1m wide LINKWELD® Gabions



0.5m wide LINKWELD® Gabions



BRACE HOOK



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.

LINKWELD® Gabions Installation



Spiral Wires

Included in your purchase price will be spiral lacing wires. The standard pitch will be 25mm and are engineered to provide a positive 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.

Diaphragm Units

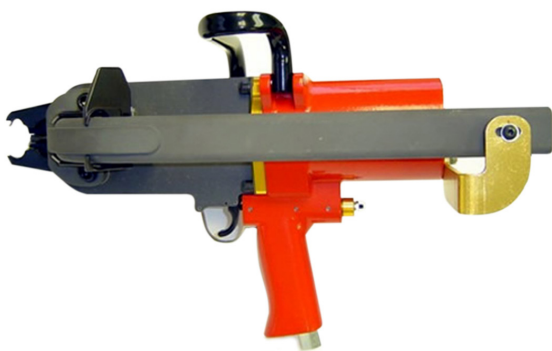
When purchasing LINKWELD® gabion units where the length of panels is 2m or greater we shall include in your purchase price internal panels which increase the stiffness of your gabion structure and helps to maintain the neat and straight lines of the unit over its service life. The diaphragm unit will ensure that the rock is contained in a compartment no longer than 1m in length by the height of the unit ordered. Diaphragm units 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 in this regard, if the size of your project requires such equipment.

Lacing Wire

Whenever you purchase LINKWELD® product we shall supply and include in your purchase price, 2% by mass of units supplied, our approved lacing wire. This will be a 2.2 mm diameter wire and shall be coated to the same coating quality as the units purchased. This lacing wire will be in addition to spiral wires that we supply and will assist with construction where it may be difficult to use some spiral wires. The method of lacing required should be a single and double loop 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 be minimal or may be extremely costly. You should always be aware that a well designed and well constructed LINKWELD® gabion structure will last for years and can enhance the aesthetics of your project.

About Us

Leaders in Geosynthetics

Global Synthetics is a 100% Australian-owned company, proud to offer a complete range of high-quality geosynthetic products backed by over 200 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.

Global Synthetics products are used in the following applications:

- Pavement Stabilisation
- Ground Improvement
- Soil Reinforcement and Retaining Structures
- Water Management
- Drainage Systems & Hydraulic Works
- Landfills
- Coastal Erosion Structures

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