



Architectural gabion is welded mesh which is mild steel coated with 300gsm of 10% aluminium and 90% zinc or 316L Stainless Steel.

We stock a wide range of gabion products and accessories including C rings and gabion tools.

• Rock Walls

Gabion makes ideal garden walls for any landscaping project. They have the advantage of being easy to build and can look great. By using different rocks and materials a gabion wall can stand out. Useful to breakup areas of garden or park into separate areas. A low wall of

1m or less can be built to curve around a seating area for example. Also great for acoustic walls by using sound absorption materials within the wall with rocks on the outsides.

• Retaining Walls

Gabion has been traditionally been used for retaining walls due to its low cost compared to conventional methods. They can be built as either mass gravity walls (relying on the weight of rock to retain the earth) or as mechanically stabilised walls (which use geogrids or earth anchors to hold the wall in place).

For general retaining where looks are less important we suggest a polymer coated woven mesh. These polymer coated gabions will last in severe environments including water for a long period of time.



• Cladding and Columns

Architectural gabion is perfect for cladding an otherwise ugly concrete facade or column. They can be built to a depth of only 200mm. Often used in front of woven (hex mesh) gabion. By building an architectural gabion facade in front of a woven wall a designer can achieve both cost savings , structural integrity and a fantastic looking building or wall.

ASTM 974-97 is the standard for welded gabion. The standard states that the minimum requirement for a gabion weld mesh is that if it is a mild steel it must have a minimum coating of 275 gsm (4mm wire). It should be noted

that standard galvanised weld mesh DOES NOT meet this standard and is usually closer to 60 grams or less of coating. In an ideal situation a standard galvanised mesh can still last 10-25 years but is severely affected in any aggressive environment.



AL-TEN™ (mild steel mesh) Gabion

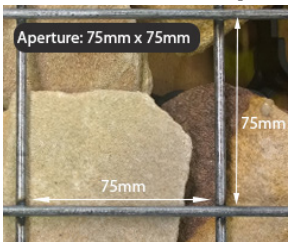
Manufactured in mild steel to a minimum wire coating of 290 grams per m2 which is Aluminium 10% and Zinc 90%. The mesh is manufactured in Australia to meet gabion specification ASTM 974-97.

AL-TEN has a high Aluminium content (10%) coating which over time turns the mesh into a darkish grey colour. This has the benefit of absorbing light rather than reflecting it. Especially apparent when viewing a wall from an angle, the rock is more visible and the mesh less so. Using a highly reflective finish such as plain gal, stainless steel or PVC results in the mesh being more visible to the eye when viewing at angles.

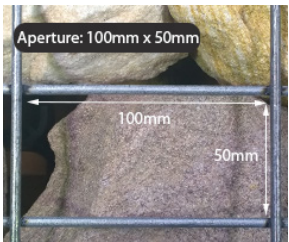
Pitch: The pitch or aperture is the distance from the centre of one wire to the centre of the next both horizontally and vertically. We are currently producing as standard products both 4mm and 5mm mesh in 75mm x 75mm aperture and 4mm in 100mm x 50mm aperture.



75mm x 75mm aperture, the most common size. When calculating cage sizes take into account that all lengths, widths and heights will be in increments of 75mm. Overall it is easier working with a square aperture than a rectangular one, however a rectangular aperture can have a stunning look.



100mm x 50mm aperture, When calculating cage sizes take into account that lengths, widths will be usually be in increments of 100mm and heights 50mm. This is based upon it being more common for 100mm in the horizontal plane.



Sometimes it is desirable to place the 100mm vertically (eg if a high wall this may be done to deter climbing).

Aperture	4mm diameter	5mm diameter
75mm x 75mm	standard	standard
100mm x 50mm	standard	custom

Custom manufacturing to different aperture sizes, for example 50mm x 50mm, 100mm x 100mm in both 4mm and 5mm diameter wire.

Specification:

	4mm	5mm
Wire diameter (average)	4.01	4.98
Wire diameter tolerance	+/- 0.08mm	+/- 0.05mm
Wire coating (average)	337g/m ²	317g/m ²
Ultimate tensile strength (wire, average)	442 MPa	427 MPa

Permathene gabion meets or exceeds ASTM 974-97 for welded mesh gabions which specifies:

Tensile Strength: The steel wire used shall have a tensile strength between 350-750N/mm².

Elongation: Elongation shall not be less than 10%.

Weld Shear Strength: The depth of the weld pot to be not less than 15% of wire ID.

Weld shear strength to reach a minimum of 50% of wire tensile strength.

Minimum metallic coatings: As per BS443 EN10244-2:2001, Table 2, Class A. 4mm (minimum coating 275g/m²).

Estimated Lifespan:

Although difficult to predict as lifespan of all steels is largely dependant upon the environment. Generally you can expect 20 years life for galvanised wire, and 2-5 times longer life span for Galfan, AL-TEN™, PVC coated and stainless steel. Stainless steel is a product we supply when specified only. It suffers tea staining and can corrode at the welds if left sitting in water or wet soils, it is a product often preferred for its bright looks, but offers little by way of longevity compared to Al-Ten or polymer coated mesh.

The mesh life is dependent upon no damage to the coating during installation or during the lifetime of the wall. Because the wire is a coated mild steel any damage to the mesh which removes the Zinc/ Aluminium coating will eventually corrode. If upon inspection damage to the coating is seen or corrosion has occurred it needs to be rectified.

Other considerations when determining lifespan is soil PH levels if the product is placed directly on the earth. A geotextile fabric such as Syntex nonwoven 145gsm may be used as a separation layer. Some rock such as limestone has a high PH (alkaline) which may have a detrimental effect on the mesh.

Rock cleaning or other chemicals including acids and caustic solutions which come into contact with a Galfan, Galvanised, Stainless Steel mesh may have a detrimental effect to metal surfaces and may cause premature corrosion and breakdown at areas of contact. It is recommended to not use any chemicals and to wash immediately with water should contact occur. If exposure to corrosive type chemicals to Zinc and Aluminium is expected alternative systems should be considered following analysis of potential problems.



Gabion Accessories:



C rings connection:

- This connection method requires a gabion C ringer tool (available for rental or purchase)
- 3mm diameter x 45mm (widest point)
- Tensile strength 1700-1900 N/mm²
Mild steel coated Galfan 5% Al, 95% Zn
- Made in Japan



Spiral connection:

- Spirals are one method to connect panels to build a gabion cage.
- Spirals are the strongest connection method
Spiral cage joiners are also supplied (larger diameter than standard spirals)



Stiffener (braces):

- Stiffeners are placed inside the cage to give cage rigidity
- In addition to stiffeners we offer lacing wire

Gabion C Ringer:

The Meihotech gabion C Ring tool is one of the most reliable hog ringers available today. Made in Japan it will work where others fail. Highest quality, in stock always. This is a pneumatic tool and requires a compressor. Air consumption is relatively low at under 9.9 litres (0.7Mpa), increase compressor size if working at heights. The compressor needs to maintain a constant pressure of 90-100 psi for standard gabion C rings (Galfan coated mild steel), or 110 psi for stainless steel. Meihotech C ringers have a 12 month warranty. Service is provided by Permathene.

This C ringer is for gabion and uses C rings which are 3mm in diameter and 45mm at the widest point.

We also offer other C ringers (fencing, bird netting, shade cloth), see General Products section on our website.



Meihotech model M-500