



Fibertex
S O U T H A F R I C A

Weldmesh Gabions Product Brochure



Manufacturing

WELDMESH GABIONS AND MATTRESSES are manufactured from fully galvanised (Class A > 260g/m²) wire of 2,5mm, 2,7mm or 3,15mm diameter, with uniform tensile strength of 400-550Mpa. Electrically welded joints have an average shear strength equal to 80% of the tensile strength of the wire.

WELDMESH GABIONS AND MATTRESSES are manufactured using SANS 462:2005 (adapted from ASTM A974-97) as a core basis for acceptance criteria.

WELDMESH MATTRESSES:

Because of improved consistency in the average weld shear strength, our mattresses are manufactured from a mesh with 75mm x 75mm apertures and from a 2.5mm wire diameter, not a 2.2mm diameter.

WELDMESH GABIONS:

The standard aperture size is a 75mm x 75mm wire spacing. Non-standard wire diameters and aperture sizes can be manufactured on request.

Binding spirals



Loose panels



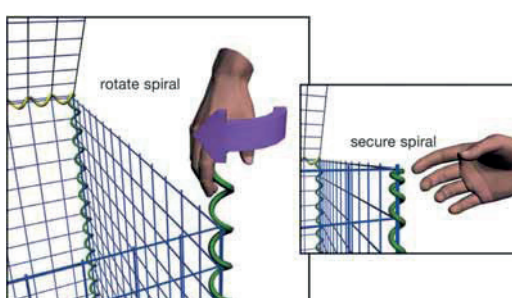
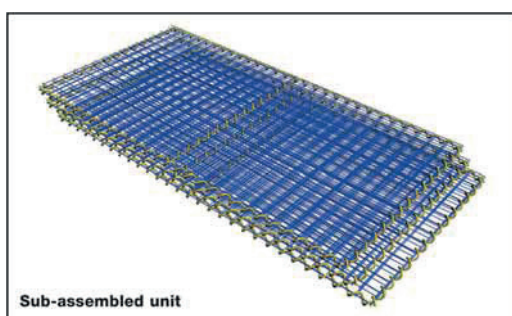
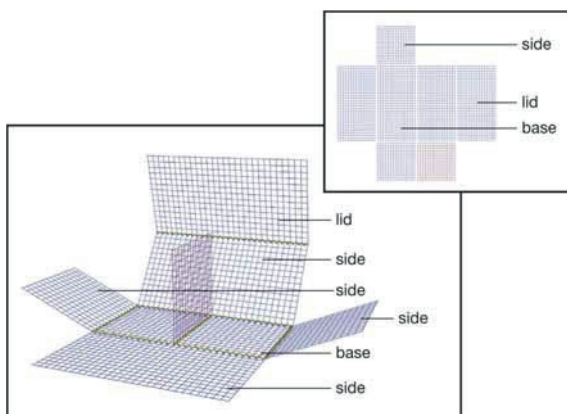
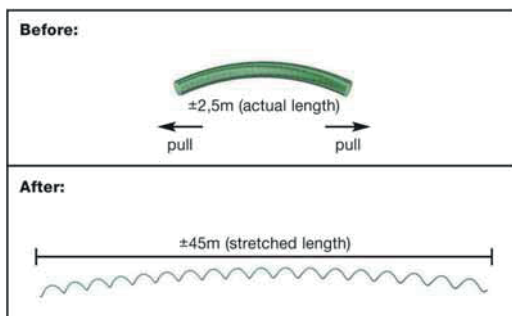
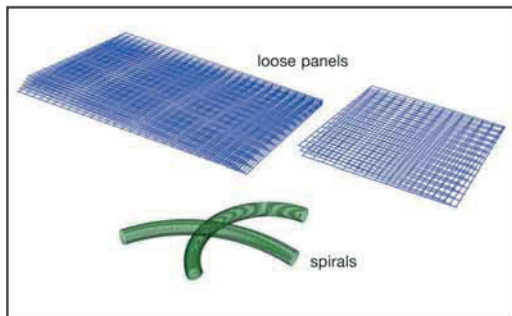
Weldmesh Gabion Box Standard Sizes:

Aperture & Wire Diameter (mm)	Specification (m) Length / Width / Height	Capacity (m ³)	Weight per box including spirals (kg)
75mm x 75mm x 2,7mm (std)	1m x 0,5m x 0,5m	0,25	4,25
	1m x 1m x 0,5m	0,5	6,47
	1m x 1m x 1m	1	9,34
	1m x 1,5m x 0,5m	0,75	9,31
	2m x 1m x 1m	2	16,39
	2m x 1m x 0,5m	1	11,53
	2m x 2m x 1m	4	28,74
	3m x 1m x 1m	3	23,43
	3m x 1m x 0,5m	1,5	16,59
	4m x 1m x 0,5m	2	21,97
	4m x 1m x 1m	4	30,89
75mm x 75mm x 3,15mm (Non-std)	4m x 2m x 0,5m	4	35,47
	1m x 1m x 1m	1	12,72
	1m x 1m x 0,5m	0,5	8,80
	2m x 1m x 1m	2	22,31
	2m x 1m x 0,5m	1	15,69
	3m x 1m x 1m	3	31,90
	3m x 1m x 0,5m	1,5	22,58
	4m x 1m x 1m	4	42,05
	4m x 1m x 0,5m	2	29,91

Weldmesh Reno Mattress Standard Sizes:

Aperture & Wire Diameter (mm)	Specification (m) Length / Width / Height	Capacity (m ³)	Weight per box including spirals (kg)
75mm x 75mm x 2,5mm (std)	1m x 1m x 0,3m	0,3	4,49
	2m x 1m x 0,3m	0,6	8,10
	3m x 1m x 0,3m	0,9	11,71
	4m x 1m x 0,3m	1,2	15,56
	3m x 2m x 0,2m	1,2	18,46
	3m x 2m x 0,3m	1,8	19,60
	3m x 2m x 0,5m	3,0	23,00
	6m x 2m x 0,2m	2,4	35,93
	6m x 2m x 0,3m	3,6	38,04
	6m x 2m x 0,5m	6,0	44,31
75mm x 75mm x 3,15mm (Non-std)	1m x 1m x 0,3m	0,3	7,12
	2m x 1m x 0,3m	0,6	12,86
	3m x 1m x 0,3m	0,9	18,59
	4m x 1m x 0,3m	1,2	24,70
	3m x 2m x 0,2m	1,2	29,31
	3m x 2m x 0,3m	1,8	31,12
	3m x 2m x 0,5m	3,0	36,52
	6m x 2m x 0,2m	2,4	57,05
	6m x 2m x 0,3m	3,6	60,39
	6m x 2m x 0,5m	6,0	70,35

Assembly and Packing



- Loose panels and binding spirals are delivered to site.
- Loose panel sizes may vary according to specific requirements.

Step one: Preparation of spirals

- Stretch binding spirals to $\pm 45\text{m}$.
- Cut to required panel length while allowing an additional 100mm for tying.

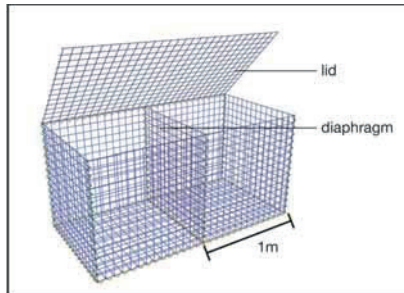
Step two: Sub-assembly

- Place panels in appropriate positions (see insert).
- Attach each panel to the base by rotating the spiral through the mesh openings (see yellow spiral).
- Secure spiral firmly at each end of the two panels.
- Repeat the above steps to complete sub-assembly.

- Panels and base can be delivered to site as individual components (loose panels and binding spirals) or sub-assembled (as per the illustration). If delivered to site sub-assembled, follow the instructions from step 3.

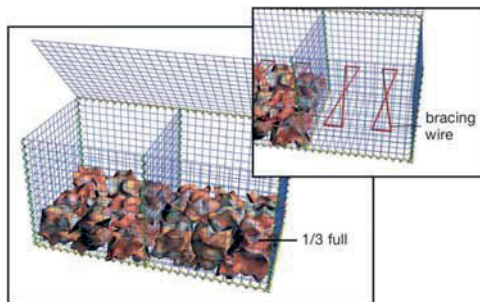
Step three: Final assembly of gabion box

- Lift all panels vertically.
- Turn spirals through mesh openings, connecting the panels.
- Secure spiral firmly at each end of the panels.



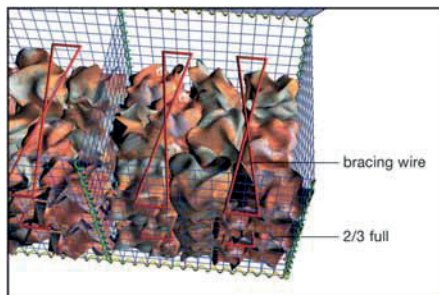
Step four: Diaphragm positioning

- Ensure diaphragm is spaced at every meter.



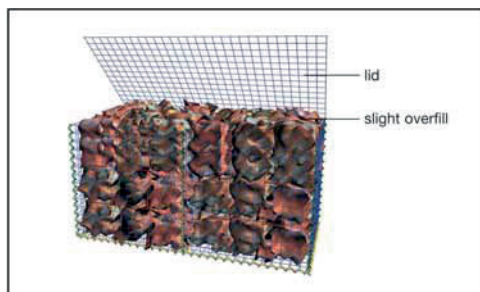
Step five: Filling and bracing

- Fill the gabion box up to one-third full.
- Place bracing wires from front to back to support the box and prevent bulging.



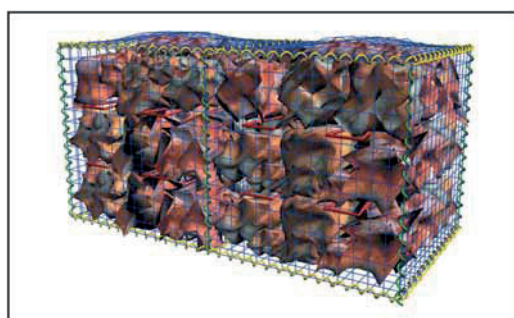
Step six: Second filling and bracing

- Fill the gabion box up to two-thirds full.
- Tie in a second set of bracing wire.
- Ensure that the front face of the gabion box is straight.



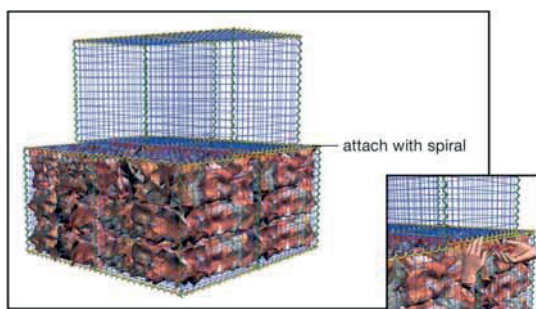
Step seven: Final filling of gabion box

- Slightly overfill the gabion box with $\pm 30\text{mm}$ to allow for settlement.



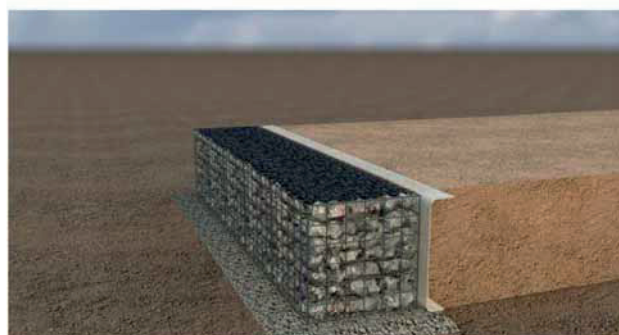
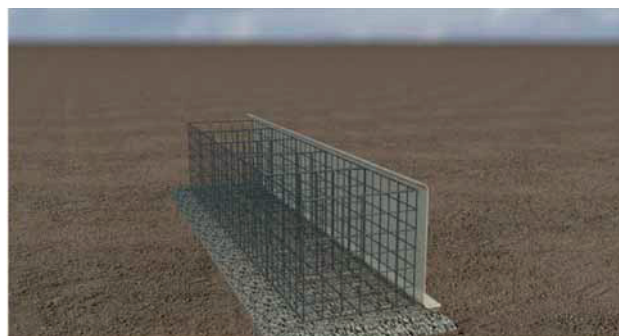
Step eight: Complete assembly

- Wire down the lid to complete assembly of the gabion box.



Step nine: Layering of boxes

- Secure second layer of gabion boxes to the bottom row by attaching two boxes with a spiral.

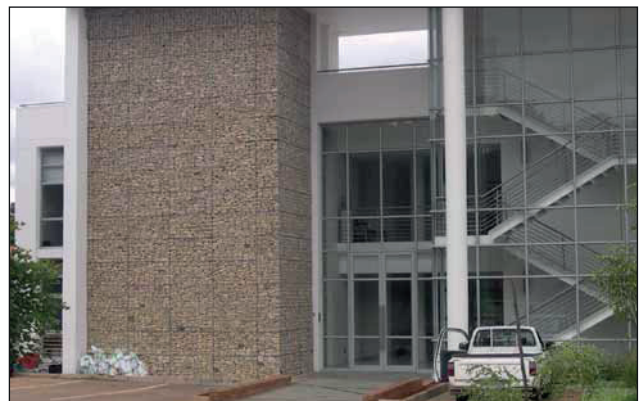


Reinforced Weldmesh Gabion Walls.

The above shows how an embankment or wall with a Weldmesh gabion facing, can be geosynthetically reinforced with a **Secugrid®** geogrid. The **Secugrid®** range consists of various flat geogrids made from interlaced extruded PET bars. The high strength monolithic welded junctions provide soil reinforcement for all civil engineering applications including steep slopes and embankments. **Secugrid®** state of the art geogrids offer superior strengths at relatively low elongation, an important design characteristic when compared to conventional grids. **Secugrid®** is backed by a comprehensive structural design team. Please enquire about a cost saving design for your project from your local Geotextiles Africa representative.

Architectural Applications (indoor & outdoor)

WELDMESH GABIONS create striking architectural structures for both indoor and outdoor applications, offering a modern aesthetic appeal with a variety of different rock finishes.



Civil Engineering Applications

WELDMESH GABIONS can be used in a wide variety of civil engineering applications for stabilisation and erosion control, including retaining walls, revetments, sea walls, embankments, canals and weirs.





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