

Gabions are baskets made of double twisted steel woven wire mesh, with mechanical characteristics higher than the one suggested from EN 10223-3. The gabion is divided into cells by means of diaphragms positioned at approximately 1m centers (Figure 1).

The steel wire used in the manufacture of the gabion is heavily zinc coated soft temper steel. A PVC coating is then applied to provide added protection for use in polluted environments where soil or water are acidic: in salt or fresh water, or wherever the risk of corrosion is present. The PVC coating has a nominal thickness of 0.50 mm. The standard specifications of mesh-wire are shown in Table 2. In order to reinforce the structure, all mesh panel edges are selvedged with a wire having a greater diameter (Table 3).

Gabions are filled with stones at the project site to form flexible, permeable, monolithic structures such as retaining walls, channel linings, and weirs for erosion control projects.

Dimensions, tolerances, and sizes of Gabion units are shown in Table 1.

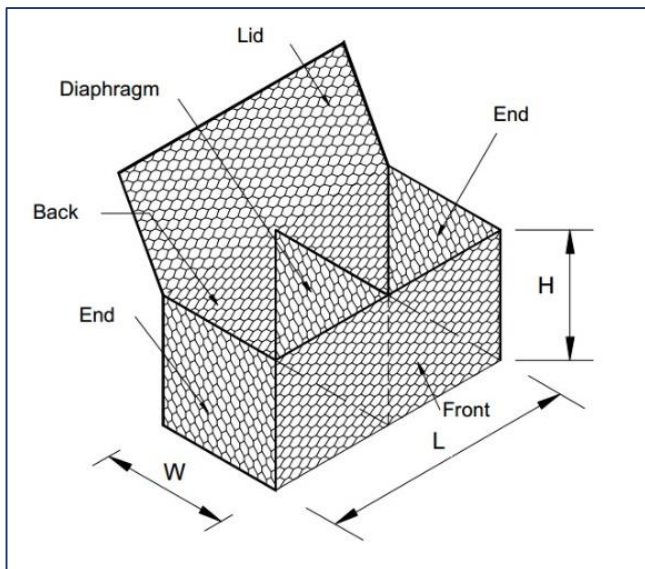


Figure 1

Wire

All tests on wire must be performed prior to manufacturing the mesh.

1. Tensile strength: The wire used for the manufacture of gabions shall have a tensile strength between 350-500 N/mm² exceeding, in order to increase the tensile resistance of the finished products, what is suggested from EN 10223-3. Wire tolerances (Table 4) are in accordance with EN 10218-2 (Class T1).

2. Elongation: Elongation shall not be less than 10%, in accordance with EN 10223-3. Test must be carried out on a sample at least 25 cm long.

3. Zinc coating: Minimum quantities of Zn shown in Table 4 meet the requirements of EN 10244-2 (Table 1 and Class A).

4. Adhesion of Zinc: The adhesion of the zinc coating to the wire shall be such that, when the wire is wrapped six turns around a mandrel having four times the diameter of the wire, it does not flake or crack when rubbing it with the bare fingers.

P.V.C. (Polyvinyl Chloride) Coating

The technical characteristics and the resistance of the PVC to ageing meet the relevant standards. The main values for the PVC material, according to EN 10245-2 are as follows:

1. Specific Weight: 1.30-1.35 kg/dm³ in accordance with ISO 1183
2. Hardness: between 50 and 60 Shore D, according to ISO 868
3. Tensile Strength: higher than 21 N/mm², according to ISO 527
4. Elongation at break: not less than 200% in accordance with ISO 527
5. Color: Grey - RAL 7037
6. UV Stabilized
7. Outwearing accelerated ageing test in SO₂ (28 cycles) in accordance with EN ISO 6988

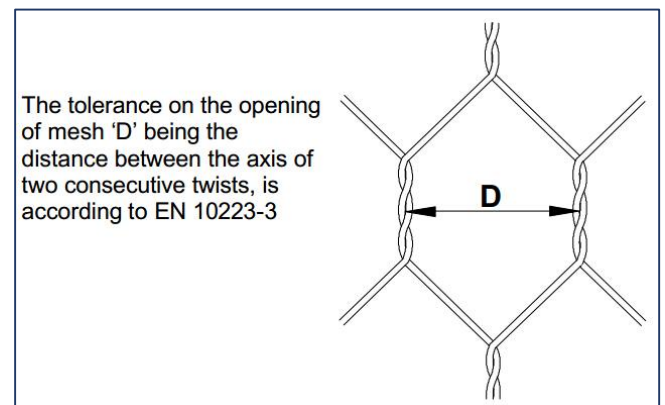


Figure 2



Figure 3

ZHUODA GABION

Table 1-Sizes for Gabions

L (m)	W (m)	H (m)	# of Cells
2	1	0.5	2
3	1	0.5	3
4	1	0.5	4
1.5	1	1	1
2	1	1	2
3	1	1	3
4	1	1	4

All sizes and dimensions are nominal.

Tolerances of $\pm 5\%$ of the width, height, and length of the gabions shall be permitted.

Quantity Request

When requesting a quotation, please specify:

- No. of units,
- Size of units (length x width x height, see Table 1),
- Mesh type,
- Type of coating.

EXAMPLE: No. 100 gabions 2x1x1 m - Mesh type 8x10 - Wire diam. 2.70/3.70 mm - Galvanized + PVC coated.

Lacing Operations

Lacing operations can be performed by using the tools as shown in Figure 6.

Steel rings having the following specification can be used instead of lacing wire (Figure 5)

- Diameter: 3.00 mm
- Tensile strength: 170 kg/mm²

Spacing of the rings must not exceed 200 mm (Figure 4).

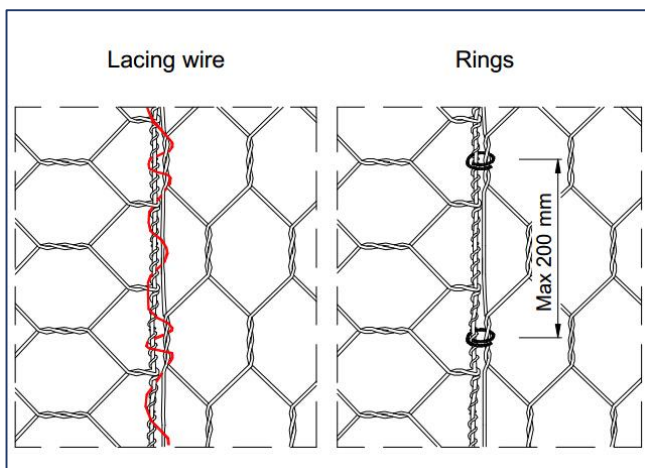


Figure 4

Table 2-Standard Mesh Wire

Mesh Type	D (mm)	Mesh Tolerance	Internal Wire Dia (mm)	External Wire Dia (mm)
8x10	80	+16% / -4%	2.70	3.70

Table 3-Standard Wire Diameters

Mesh Type	Mesh Wire (mm)	Selvedge Wire (mm)	Lacing Wire (mm)
8x10	2.70/3.70	3.40/4.40	2.20/3.20

Table 4-Wire Tolerances and Coating

Wire Diameter ϕ mm	2.20	2.40	2.70	3.00	3.40	3.90
Wire Tolerance ($\pm \phi$ mm)	0.06	0.06	0.06	0.07	0.07	0.07
Min. Qty of Zinc gr/m ²	230	230	245	255	265	275

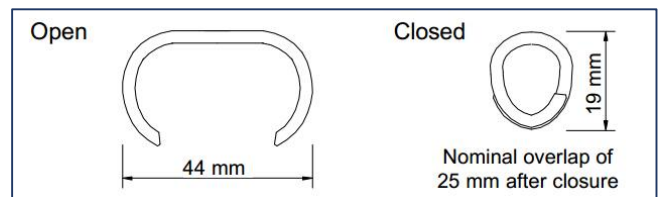


Figure 5



Figure 6

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