

Gabions are baskets made of 8x10 double twisted steel woven wire mesh, as per ASTM A975-97 (Figs. 1, 2). 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.

The steel wire used in the manufacture of the gabion is heavily zinc coated soft temper steel. The standard specifications of mesh wire are shown in Table 2. The gabion is divided into cells by means of diaphragms positioned at approximately 1 m centers (Fig.1). In order to reinforce the structure, all mesh panel edges are selvedged with a wire having a greater diameter (Table 3). Dimensions and sizes of galvanized gabions are shown in Table 1.

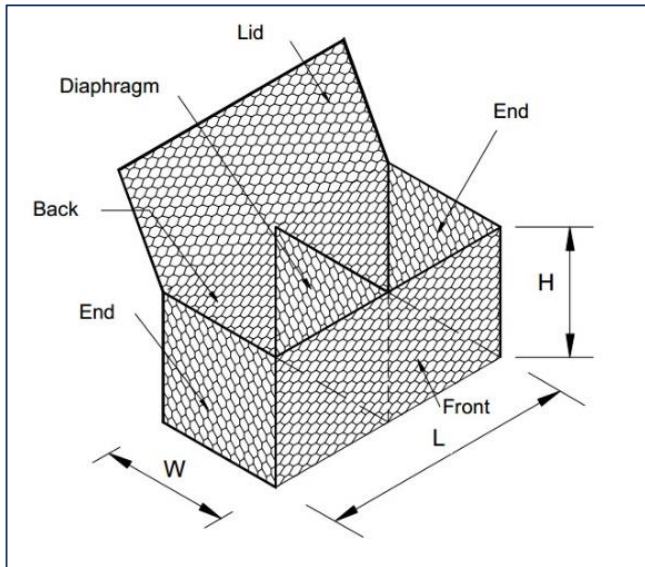


Figure 1

Wire

All tests on wire must be performed prior to manufacturing the mesh. All wire should comply with ASTM A975-97, style 3 coating and galvanized. Wire used for the manufacture of Gabions and the lacing wire, shall have a maximum tensile strength of 515 MPa as per ASTM A641 -03, soft temper steel.

Woven Wire Mesh Type 8x10

The mesh and wire characteristics shall be in accordance with ASTM A975-97 Table 1, Mesh type 8x10. The nominal mesh opening $D = 83$ mm as per Fig. 2.

The minimum mesh properties for strength and flexibility should be in accordance with the following:

- Mesh Tensile Strength shall be 51.1 kN/m minimum when tested in

accordance with ASTM A975 section 13.1.1

- Punch Test resistance shall be a minimum of 26.7 kN when tested in compliance with ASTM A975 section 13.1.4 .
- Connection to Selvedges should be 17.5 kN/m when tested in accordance with ASTM A975.

Lacing, Assembly and Installation

Gabion units are assembled and connected to one another using lacing wire specified in Table 3 and described in Fig. 3. Lacing wire is to be used as internal connecting wires when a structure requires more than one layer of gabions to be stacked on top of each other. Internal connecting wires with lacing wire shall connect the exposed face of a cell to the opposite side of the cell. An exposed face is any side of a gabion cell that will be exposed or unsupported after the structure is completed. Galvanized ring fasteners can be used instead of, or to complement, the lacing wire (Fig. 4).

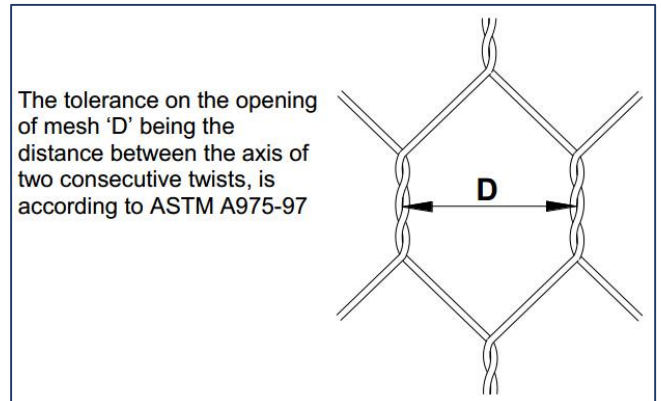


Figure 2



Figure 3-Example of Gabion Installation

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 2x1x1m - Mesh type 8x10 - Wire diam. 2.70 mm - galvanized.

Lacing Operations

Lacing operations can be made by using lacing wire or stainless steel fasteners. With stainless steel fasteners, the ring can be placed using automatic or manual tools (Fig. 5.). The maximum spacing of the fasteners is determine by ASTM A975-97 Table 2, Pull Apart Resistance test.

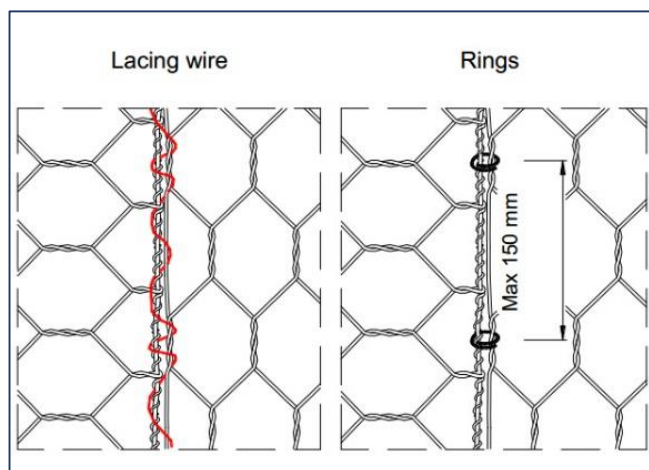


Figure 4

Table 2-Standard Mesh Wire

Mesh Type	D (mm)	Mesh Tolerance	Mesh Wire (mm)
8x10	83	$\pm 10\%$	2.70-3.05

Table 3-Standard Wire Diameters

Wire Diameter ϕ mm	2.20	2.70	3.05	3.40	3.80
Wire Tolerance (\pm) ϕ mm	0.10	0.10	0.10	0.10	0.10
Min. Qty of Zinc gr/m2	214	244	259	259	275

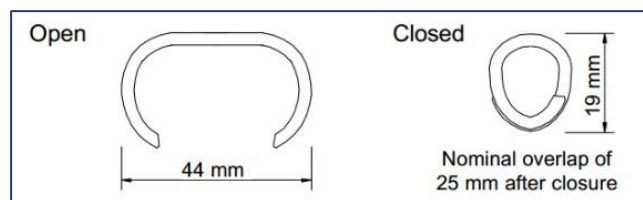


Figure 5



Figure 6

Anping County Zhuoda Hardware Mesh Co., Ltd.

Kehulin Industrial Park, Anping County, Hebei 053600, China

Tel: +86-311-67795238/89902855 Fax: +86-311-67795238

Email: sales@zhuoda-gabion.com

Website: www.zhuoda-gabion.com

