

**GABION**

**Material Delivery**

Gabions are manufactured with all components mechanically connected at the production facility, as per ASTM A975-97. All gabions are supplied in the collapsed form, either folded and bundled or rolled. The bundles are compressed and strapped together at the factory for easy shipping and handling. Lacing wire is shipped in coils. Fasteners are shipped in boxes. Preformed corner stiffeners are shipped in boxes.

**Assembly**

Open and unfold each gabion on a flat, hard surface and remove any shipping hold if necessary. This can be done by placing the fold over a 2" x 4" board and walking along the sides. Lift up the sides, ends and diaphragms into a vertical position to form an open box shape (Fig. 1). Connect the back and the front panels of the gabion to the end panels and center diaphragms. The top corner of the end panels and center diaphragms have the selvage wire extending out approximately 4 in. (102 mm) from these panel edges. Raise the end panels and the diaphragms to a vertical position and wrap the selvage wire around the edge wire of the top and back panels.

Connect the edges of the gabion and diaphragms by using either lacing wire or ring fasteners (Fig. 2). Ring fasteners shall not be spaced more than 6 in. (150 mm) apart. The procedure for using lacing wire consists of cutting a sufficient length of wire, and first looping and/or twisting the lacing wire to the wire mesh. Proceed to lace with alternating double and single loops through every mesh opening approximately every 6 in. (150 mm) pulling each loop tight and finally securing the end of the lacing wire to the wire mesh by looping and/or twisting. The use of pliers to aid assembly and tying of the units using the lacing wire supplied with the gabions is normally recommended.

Erect the diaphragms into the vertical position, and tie them to the side panels in the same manner.

**Fastening Procedure**

When using lacing wire, cut off a piece of wire approximately 1.5 times the length of the edge to be tied. Longer edges shall be joined by several lengths of wire. Tie wires shall be secured around the selvage wire or heavier edge wire, where present, by looping and twisting the lacing wire around itself. Proceed tying with alternate double and single loops. Double loops shall be made at intervals not greater than 6 in. (150 mm). The baskets should be pulled lightly together during the tying operation. The other end of the tie wire shall be secured by again looping and twisting the wire around itself. When using lacing wire to assemble the units, pliers may be used to create tight joints. Care should be taken to avoid damaging the wire coating.

When steel ring fasteners are used, the use of either a mechanical or a pneumatic fastening tool is required. Spacing of the rings shall be in accordance with ASTM A975-97 Table 2, Panel to Panel connection, Pull-Apart Resistance. In any case, ring fasteners spacing shall not exceed 6 in. (150 mm). Rings shall be installed at the end and center diaphragms and along all edges. Care should be taken to ensure the steel ring fastener is completely closed after installation. When this is not possible, connection must be complemented with lacing wire.

**Foundation Preparation**

The foundation on which the gabions are to be placed shall be level, and graded to the elevations as shown on the project construction drawings. The foundation for gabions shall be level, smooth, and free of surface irregularities, loose material, and vegetation in accordance with the project specifications. Appropriate measures shall be taken for filtering and drainage of the foundation, as per the project specifications (filter cloth, drain works, etc.). Geotextiles required to be installed behind gabion structures shall comply with the requirements for subsurface drainage applications.

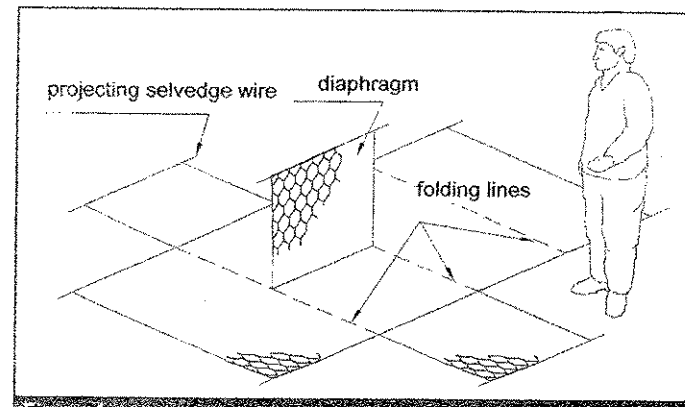


Figure 1

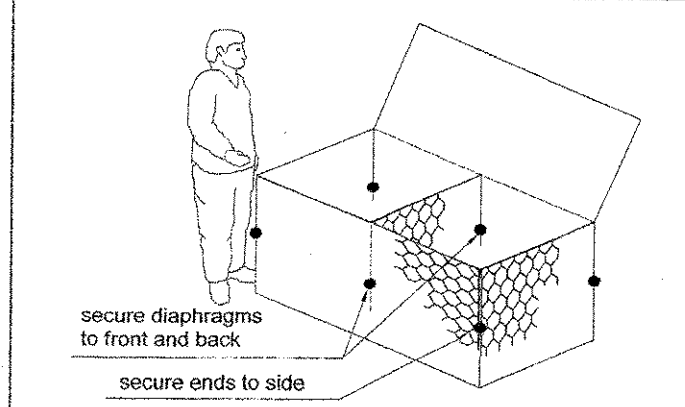


Figure 2

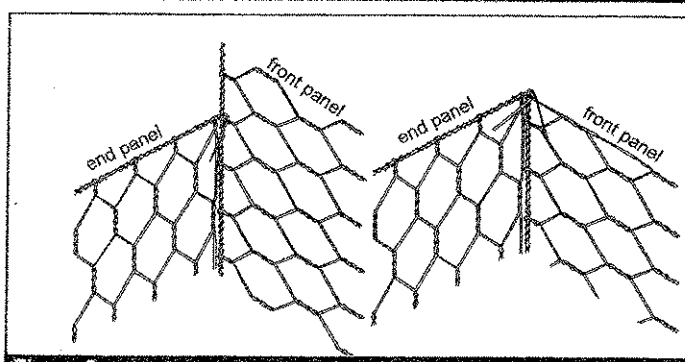


Figure 3

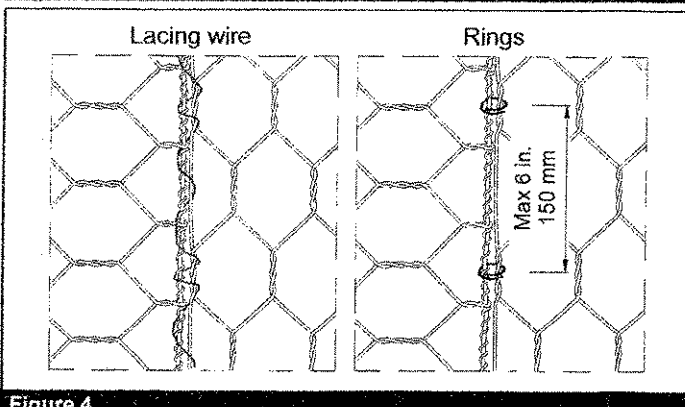


Figure 4