

ArtWeld Gabion

Product Specification

(Non-Galvanized Black Wire)

1.0 DESCRIPTION

This work shall consist of Hilfiker ArtWeld Gabions (welded wire mesh) and filling the gabions with rock in accordance with the details shown on the plans and these special provisions.

2.0 MATERIALS

Gabions shall be of a single unit construction. The base, ends, sides, and lid shall be fabricated from 3"x3" 9 Gauge Black Welded Wire Mesh and connected in such a manner that strength and flexibility at the connection are at least equal to that of the wire mesh. The gabions shall be fabricated in such a manner that they can be assembled at the construction site with Spiral Binders and pre-formed stiffeners to form rectangular baskets of the specified size.

The height, length, and width of the gabions shall not vary more than 5 percent from the dimensions shown on the plans.

Gabions shall be divided into cells of equal length, not more than 4 feet long, by diaphragms made of the same wire mesh as used for the gabion body. Each gabion shall be fabricated with the necessary diaphragm or diaphragms secured in proper position on the base in such a manner that no additional tying at the base will be necessary.

A Certificate of Compliance shall accompany each shipment of gabions to a job site.

Wire for the manufacture and assembly of gabions shall meet or exceed all of the following requirements:

<u>Description</u>	<u>Requirement</u>
3"x3" (9 ga. - 0.144 in. min.) Welded Wire Fabric	ASTM A185
9 ga. Pre-Formed Stiffener	ASTM A82
9 ga. Spiral Binder	ASTM A82

3.0 ROCK

Rock for filling the gabions shall be as listed:

Gabions \geq 1': 100% passing 12 inches, 0-5% passing 4 inches
Gabions \leq 1': 100% passing 8 inches, 0-5% passing 4 inches

4.0 CONSTRUCTION

Gabions shall first be assembled individually as empty units. Each gabion shall be manufactured with the necessary panels, properly spaced and secured, so they can be rotated into position at the construction site with no additional tying of the rotation joint. The panels and diaphragms shall be rotated into position and joined along vertical edges. Temporary Hog Ring fasteners may be used for preassembly to connect panels.

Use 9-gauge spiral binders to connect all diaphragms and lids, the spiral shall be screwed into position such that it passes through each mesh opening along the joint. One end of all 9-gauge spiral binders shall be crimped to secure the spiral in place. Temporary fasteners may remain in place.

4.1 Assembly of Successive Gabions (Gabion-to-Gabion Joints)

Empty gabions shall be set in place. Individually constructed empty gabions shall be joined successively to the next empty gabion with 9-gauge spirals, before filling with rock begins. The 9-gauge spiral binders shall secure, in one pass, all selvage or end wires of panels of all the adjacent gabions along the joint.

4.2 Filling With Rock

When constructing with 1.5-foot high or 3-foot high gabions, pre-formed stiffeners shall be used to produce a flat, smooth external surface.

Pre-formed Stiffeners shall be installed on the exposed face of the gabion prior to rock placement, two rows at 1/3 points on 3' high gabions, one row at 1/2 point in 1.5' high gabions.

When filling 3-foot high gabions, rock shall be placed in two 1-foot layers; when filling 1.5-foot high gabions, rock shall be placed in two 9-inch layers.

The last layer of rock shall slightly overfill the gabions such that the lid will rest on rock when it is closed.

4.3 Closure of Lids

Lids shall be tied along the front, ends, and diaphragms of individual gabions and to successive gabions with 9-gauge spiral binders in the same manner as specified elsewhere in this specification.

5.0 MEASUREMENT

Quantities of gabions to be paid for will be measured by the cubic yard and will be determined from the dimensions shown on the plans or the dimensions directed by the engineer.

6.0 PAYMENT

The contract price paid per cubic yard for gabion shall include full compensation for furnishing all labor, materials (including excavation and backfill), as shown on the plans, these special provisions, and as directed by the engineer.