MACCAFERRI

**Maccaferri** reserves the right to amend product specifications without notice and specifiers are requested to check as to the validity of the specifications they are using.

## Installation and Filling

After the foundation has been prepared, the pre-assembled gabions are placed in the desired location to form the structure. Gabions shall be connected together and aligned before filling the baskets with rock. All connections (panel-to-panel and basket-to-basket) shall be already carried out as described in the assembly operations.

Rocks for gabions may be produced by any suitable quarrying method, and by the use of any device that yields the required sizes within the gradation limits chosen. Rocks shall be hard, angular to round, durable and of such quality that they shall not disintegrate on exposure to water or weathering during the life of the structure.

Gabion rocks shall range between 4-8 in. (100-200 mm). The range in sizes may allow for a variation of 5% oversize and/or 5% undersize rock, provided it is not placed on the gabion's exposed surface. In all cases, the oversize rock shall not be larger than 10 in. (250 mm), and the undersize rock shall not be smaller than 2 in. (50 mm).

During the filling operation some manual stone placement is required to minimize voids. The exposed faces of vertical structures may be carefully hand placed to give a neat, flat, and compact appearance. The cells shall be filled in stages so that local deformation may be avoided. That is, at no time, shall any cell be filled to a depth exceeding 1 ft (300 mm) higher than the adjoining cell (Fig. 7). When using PVC gabions, care should be taken when placing the stone to assure that the PVC coating on gabions will not be damaged.

Stiffeners or crossties shall be installed as indicated (Fig. 6), fixed at 1/3 and 2/3 of the height for 3 ft or 1 m gabions as the cell is being filled. In 1.5 ft (500 mm) high units stiffeners may be fixed at the half height level, if required. Preformed corner stiffeners are installed at 45° to the face/side of the unit, extending an equal distance along each side being braced (approximately 1 ft [300 mm]). Minimize the number of voids by using a well-graded stone and avoid large stones in order to achieve a dense, compact stone fill. All corners should be securely connected to the neighboring gabions of the same layer before filling the units.

When more than one layer of gabions is required, in order for the individual units to become incorporated into one continuous structure, the next layer of gabions must be connected to the layer underneath after this layer has been securely closed (Fig. 8).

Gabion placement should be front to front and back to back, so that pairs of facing lids can be wired down in one process.

Secure the end from which the work is to start, by partially filling the end unit with rock.

## Closing

To allow for settlement, level off the fill 1-1.5 in. (25-40 mm) above the top of the mesh. In slow protection aprons downstream of weirs and places where water will fall directly on the gabions, install bracing wires vertically between the top and bottom mesh. Be sure to keep the top edge of the diaphragm exposed. Fold the lid down and pull the edges of the panels to be connected using an appropriate tool such as a lid closer (Fig. 9). The lids shall be tightly laced along all edges, ends and diaphragms in the same manner as described for assembling units (Fig. 4). Adjacent lids may be securely attached simultaneously. All end wires should then be turned in to avoid protrusions.


| Lid closer | Pneumatic Spenax tool | Manual tool |
|---|---|---|

Figure 9




Figure 5

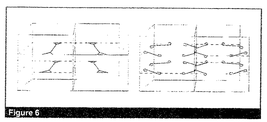

Figure 6

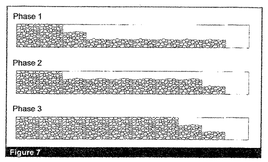


Figure 7

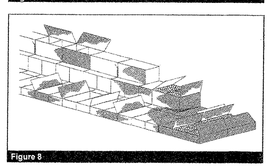

Figure 8

MACCAFERRI

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