ASSEMBLY & FILLING GUIDE FOR WELDED WIRE MESH GABIONS

Before starting assembly ... put on your safety glasses and work gloves !!!

Each gabion includes: Corner stiffeners, spiral binders (these are long spring-like formed wire for panel joints) and a coil of tie wire

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Unfold gabion panels and layout flat (6' basket shown in Fig 1)

Adjacent panels should be joined together at intersecting corners by winding the spiral tie starting at the top and winding down the mesh.

At the top and bottom end of the spiral tie, turn the ends back vertically and close tight to secure the spiral from moving.

Corner stiffeners and a coil of lacing wire is supplied for internal bracing and joining to adjacent baskets.

Adjacent panels can be joined together by a common spiral or tie wire, weaving in and out of each mesh opening. As the wire is weaved in and out of the mesh it is pulled in the direction of weaving which then forms a tight joint.

All horizontal joints are laced in the factory except the lid. Start and finish lacing the lid with wire wrapped around each panel opening 3 times.

It is recommended that the maximum length to be laced is approximately 3 ft. This requires about 5 ft of wire.

NOTE: Do not cut all tie wire, as longer lengths of wire are needed for internal bracing.
ALTERNATE FASTENING

‘C’ HOG RINGS: Can be supplied at an additional cost and can be used for all jointing of units. Closing the rings requires a mechanical tool (smaller projects) and a pneumatic gun (larger projects). ‘C’ rings must be fixed every other mesh space on all joints as shown below.

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Rotate front, back, ends and diaphragms vertically and join using the spiral ties (Fig 2).

Note: Assemble internal joints and all side panel joints. Set assembled units in position to the correct line, level and inclination as required by the design and form joint to the adjacent units vertically.
FIELD MODIFICATIONS:

GABIONS MAY BE FIELD CUT TO FIT CURVES, CULVERTS OR ANGLES.
RECONNECT THE ENDS OF THE GABIONS THE SAME WAY YOU WOULD ASSEMBLE AN UWCUT GABION

FILLING:
Fill the gabion unit with correctly graded rock type to 1/3 full level for 3 ft deep units or 1/2 full level for 18" deep units. Fill a series of cells in a run. If large voids are visible within the cell, re-orient the rock to minimize the voids. If a hand-packed face is required, place rocks into the cells, load to the back of the cell first, then hand pick rocks for the facing and stack to achieve a dry stone wall appearance on the face.

BEGIN THE FILL
CHECK THE WALL ALIGNMENT BEFORE YOU BEGIN BACKFILLING.
USE 3-1/2" TO 12" CLEAN STONE, OR CHECK THE PROJECT SPECIFICATIONS (SOME REQUIRE DIFFERENT SIZES).
PLACE THE STONE IN 12" LIFTS. SPREAD IT BY HAND TO MINIMIZE VOIDS. TAKE CARE TO KEEP THE BASKETS SQUARE AND THE DIAPHRAGMS STRAIGHT.

12" MAXIMUM RECOMMENDED
IT IS RECOMMENDED THAT THE FILL IN ANY CELL NEVER BE MORE THAN 12" HIGHER THAN THE FILL IN AN ADJOINING CELL.

CONTINUE FILLING THE GABIONS IN 12" LIFTS UNTIL THEY ARE FILLED. FILL FLUSH OR SLIGHTLY ABOVE THE TOP OF THE GABION.
WIRE REINFORCING:
To prevent bulging of the face panels, make a wire loop from the front to back panel forming a windlass bracing tie. Using a flat rock or bar create a tourniquet which pulls the front and back panels together (FIG 4). Loose or under-tightened ties may cause bulging.

Timbers or scaffold tubes can be temporarily wired to the face externally to act as a brace to prevent bulging. Remove brace when filling is complete.

CORNER STIFFENERS:
These are important components that will help to keep your gabions square. Position stiffeners at 12" and 18" level for 3 ft deep units and at 9" level for 18" deep units. Also install stiffeners in each corner in the center of the rear panel. Hook the stiffeners four meshes in from the corner around a weld intersection as shown in photo. Crimp both ends of the stiffeners closed. (FIG 5).
BE SURE TO HOOK THE STIFFENERS ACROSS A WELD INTERSECTION AS SHOWN.
CRIMP BOTH ENDS OF THE STIFFENERS CLOSED.

STIFFENER INSTALLATION

BEFORE FILLING, INSTALL STIFFENERS ACROSS THE CORNERS OF THE GABIONS ON ALL EXTERIOR SIDES OF THE STRUCTURE

NO STIFFENERS IN INTERIOR CELLS

FACE OF STRUCTURE
STIFFENER

END OF STRUCTURE
TWO ROWS OF STIFFENERS (4 PER CELL) ARE REQUIRED AT ALL EXTERIOR SIDES

AN 18" Gabion Requires Only One Row of Stiffeners

A 12" Gabion Does Not Require Stiffeners
MULTIPLE COURSES:

ONE SPIRAL MAY BE USED TO CONNECT THE LID AND UPPER BASKET IN ONE STEP.

LOWER THE LIDS. PLACE THE NEXT COURSE OF GABIONS. USE SPIRALS (OR TIE WIRE) TO PERMANENTLY BIND THE BOTTOM EDGES TO THE FILLED GABIONS.
FORMING ANGLES WITH GABIONS

TO FORM A CONCAVE ANGLE
(PLAN VIEW LOOKING DOWN ON THE WALL)

TRIM THE BACK OF THE GABION IF NECESSARY

SPiral OR TIE WIRE

BACK OF GABION WALL

REMOVE THE END PANEL ON THE LEFT GABION AND SLIDE THE END OF THE RIGHT GABION INSIDE. OVERLAP THE BOTTOM AND LID PANELS

TO FORM A CONVEX ANGLE
(PLAN VIEW LOOKING DOWN ON THE WALL)

SPREAD THE GABIONS APART AS NECESSARY

BACK OF GABION WALL

SPIRAL

FACE OF GABION WALL
NARROW GABION WALLS

Narrow width Gabions used to construct free standing walls must be stabilized using internal pipes or structural steel posts imbedded in concrete as illustrated below:

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*** FAILURE TO FOLLOW THE ABOVE INSTRUCTIONS MAY RESULT IN A POOR QUALITY INSTALLATION AND MAY BE STRUCTURALLY UNSOUND

CONTACT US WITH ANY QUESTIONS OR COMMENTS

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