Assembly

- Open the bundle and unfold each unit.
- Lift the sides, the ends and the diaphragms of each unit into vertical position.
- Attach the sides of four corners together with locking wire fastener or lacing wire and the diaphragms to the front and back of the gabion.

Gabion Assembly

Installation and Filling

Empty gabion baskets shall be assembled individually and placed on the approved surface to the lines and grades as shown or as directed, with the position of all creases and that the tops of all sides are level. All gabion baskets shall be properly staggered horizontally and vertically as shown in the construction drawings. Finished gabion structures shall have no gaps along the perimeter of the contact surfaces between adjoining units. All adjoining empty gabion units shall be connected along the perimeter of their contact surfaces in order to obtain a monolithic structure. All lacing wire terminals shall be securely fastened. All joining shall be made through selvedge-selvedge or selvedge-edge wire connection; mesh-mesh wire connection is prohibited except in the case where baskets are offset or stacked and selvedge-mesh or mesh-mesh wire connection would be necessary. As a minimum, a fastener shall be installed at each mesh opening at the location where mesh wire meets selvedge or edge wire.
End cells only

BACK FACE

FRONT FACE

*Interior cells on exposed face require four (4) corner TACT Ties only.
a. The initial line of gabion basket units shall be placed on the prepared filter layer surface and adjoining empty baskets set to line and grade, and common sides with adjacent units thoroughly laced or fastened. They shall be placed in a manner to remove any kinks or bends in the mesh and to uniform alignment. The basket units then shall be partially filled to provide anchorage against deformation and displacement during the filling operation. The stone shall be placed in the units as specified or directed by the manufacturer.

b. Deformation and bulging of the gabion units, especially on the wall face, shall be corrected prior to additional stone filling. Care shall be taken, when placing the stone by hand or machine, to assure that the PVC coating on the gabions will not be damaged if PVC is utilized. All stone on the exposed face shall be hand placed to ensure a neat compact appearance.

c. Gabions shall be uniformly overfilled by about 1-2 inches to account for future structural settlements and for additional layers. Gabions can be filled by any kind of earth filling equipment. The maximum height from which the stones may be dropped into the baskets shall be 3'.

Gabion stone placement,
When excavation and foundation preparation are completed, the pre-assembled gabions shall be placed in their proper location according to the plans provided. Gabions shall then be connected together and aligned prior to filling with stone. The stone fill shall have a gradation as listed or specified within the contract specifications or as listed within this specification. The stone fill shall be placed into the gabion units in 1’ lifts. Cells shall be filled to a depth not exceeding 1’ at a time. The fill layer should never be more than 1’ higher than any adjoining cell. Connecting wires shall be installed from the front to back and side to side of the individual cells at each 1’ vertical interval for gabions with a depth of 3’. The voids shall be minimized by using well graded stone fill and by hand placement of the facing in order to achieve a dense, compact stone fill. All corners shall be securely connected to the adjoining basket 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 shall be connected to the layer underneath after this layer has been securely closed. Gabions shall be uniformly overfilled by about 1-2 inches to account for structural settlement.

Lid Closing:
The lids of the gabion units shall be tightly secured along all edges, ends and diaphragms in the same manner as described for assembling. Adjacent lids may be securely attached at the same time. The panel edges shall be pulled to be connected using the appropriate closing tools where necessary. Single point leverage tools, such as crowbars will not be acceptable. All end wire shall then be turned in.
**Installation Information - Reno Mattress**

*Simple Steps to Mattress Construction*

For easy handling and shipping, Mattresses are supplied folded flat in bundles of 25. Lids are packaged in separate bundles or in rolls for larger units of Mattresses.

**Step One**

![Diagram](Image)

Individual Mattress is first unfolded on flat, hard ground and stamped to remove all kinks. The two long sides and both end panels are then lifted upright and secured in position by tying the selvedge wires together.

**Step Two**

![Diagram](Image)

The vertical edges of all internal diaphragms are attached to the sides and laced with typing wire or approved interlocking wire fastener.

**Step Three**

![Diagram](Image)

The assembled Mattress is then aligned in the required position and tied or fastened to adjacent mattress along the whole length of
selvedge wire. Mattress units should be placed in proper position so that movement of rock fill inside the cage -- due to gravity or flowing current -- is minimal. Thus, on slopes, Mattresses should be placed with its internal diaphragms at right angles to the direction of the slope.

On river beds, position Mattress with the internal diaphragms at right angles to the direction flow.

**Step Four**

![Step Four Diagram]

Next, the stone is placed into the compartments (cells). If it’s a slope, start from the bottom. One or more Mattresses can be filled at the same time.

Sequence the installation by keeping the stone filling crew well ahead of the lid placement crew. Lids or top panels must be securely tied or fastened to side-tops and end panels and also to the top of the inner partitions.

**Step Five**

![Step Five Diagram]

**Step Six**

![Step Six Diagram]

The Mattresses may be either telescoped or cut to form and tied at required shape when necessary, e.g. when Mattresses are laid on a radius. For a sharp curve, it may be necessary to cut the Mattress diagonally into triangular sections and tie the open side securely to an intact side panel.