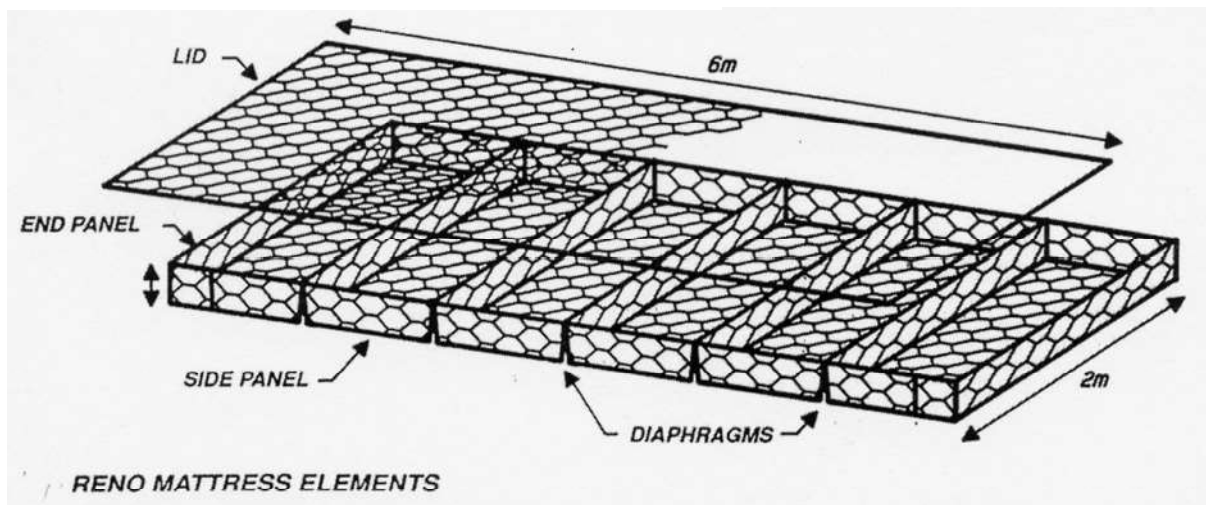
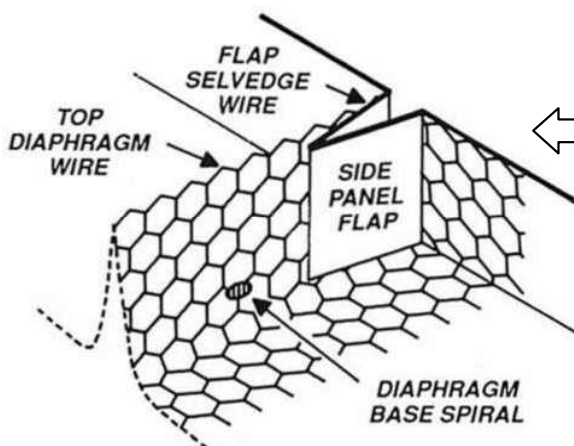
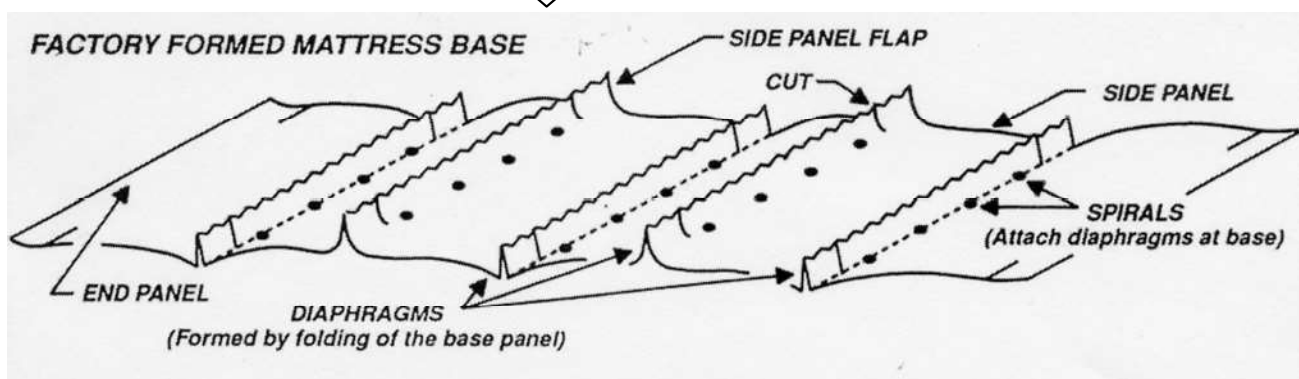


Assembly

1. Unpack the mattresses and lids.

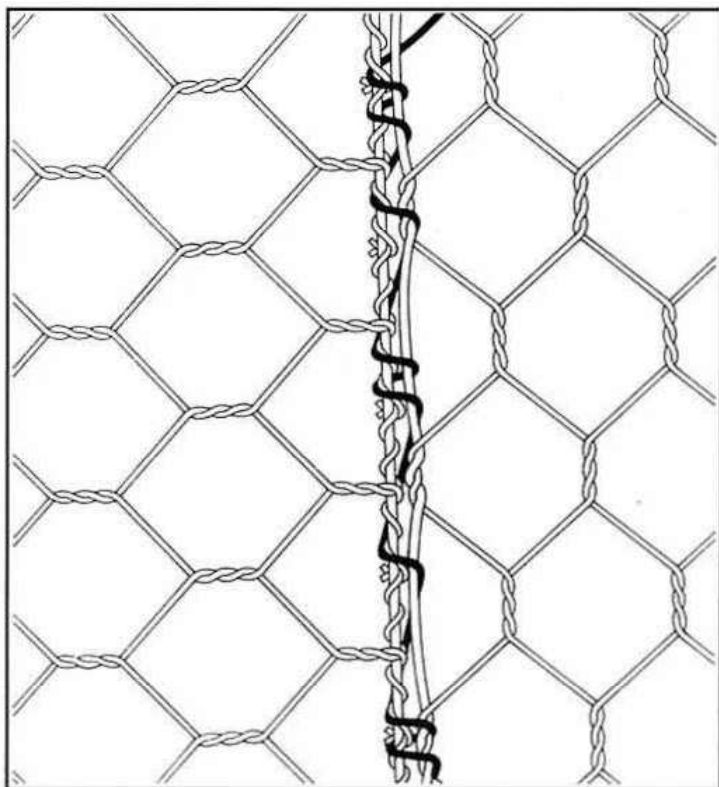


2. Flatten out each mattress in a hard, flat surface, and stamp out unnecessary creases. Creases will have to be stamped into the bottom of the 2nd and 4th diaphragms.



3. Ensure that each diaphragm is vertical and the correct height. Fold the sides and ends of the mattress to meet the top of the diaphragms.

Fold the side panel flaps to lie adjacent to the diaphragms.



← **4.** The ends of the diaphragms must now be permanently laced to the sides of the mattress with single loops and double loops in turn at every second mesh interval.

At the four corners, bend the projecting lengths of the end panels to overlap the sides, and lace up with binding wire.

When the mattress is placed over a geotextile, care must be taken to ensure that projecting ends of wire are bent upwards to avoid puncturing or tearing the cloth.

Carry the wired up mattress to its final position, and wire it securely to the adjacent mattresses.

Mattresses should be placed and wired together empty as it is difficult to wire mattresses together when both are full of stone.

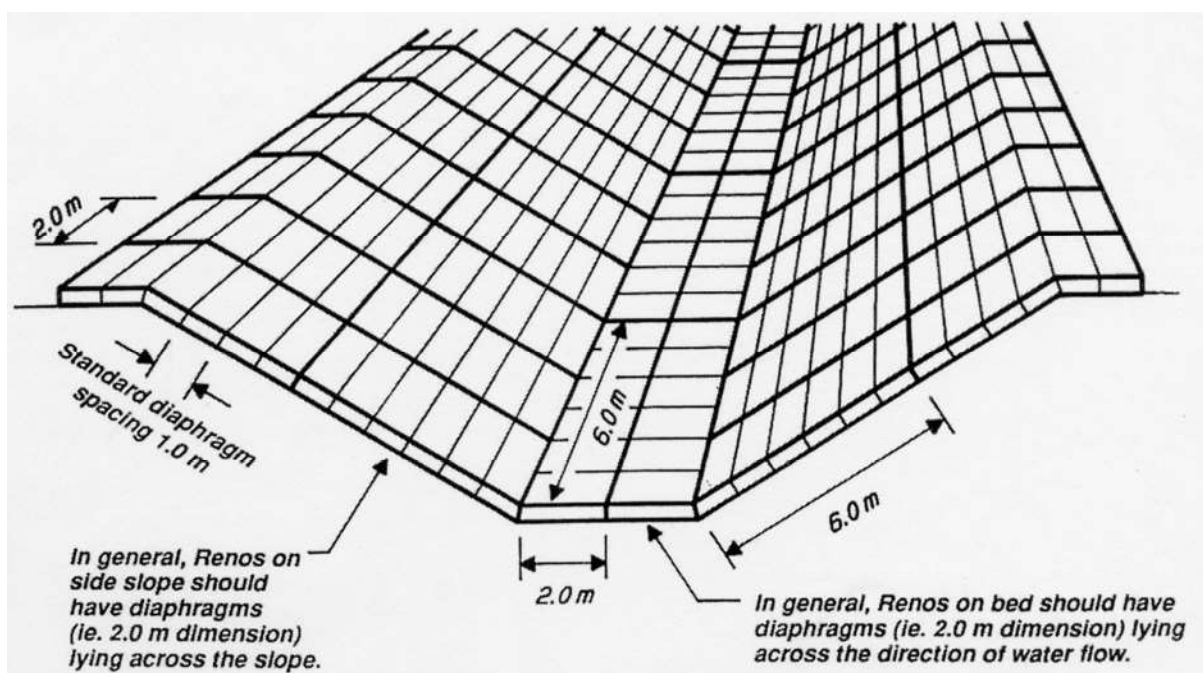
All hand wiring must be done as a continuous and taut lacing operation. Begin wiring by securing the binding wire to the corner of the panels to be joined by looping it through and twisting it together. Then lace with single loops and double loops in turn every second mesh interval.

Finally poke loose end inside the mattress.

TIGHTNESS OF THE MESH AND WIRING IS ESSENTIAL AT ALL TIMES.

5. On slopes, the mattress should generally be laid with the diaphragm across the slope rather than up and down the slope.

On stream beds, the mattress should generally be laid with the diaphragm across the direction of the water flow.





All hand wiring must be done as a continuous and taut lacing operation with single loops and double loops in turn at every second mesh interval.

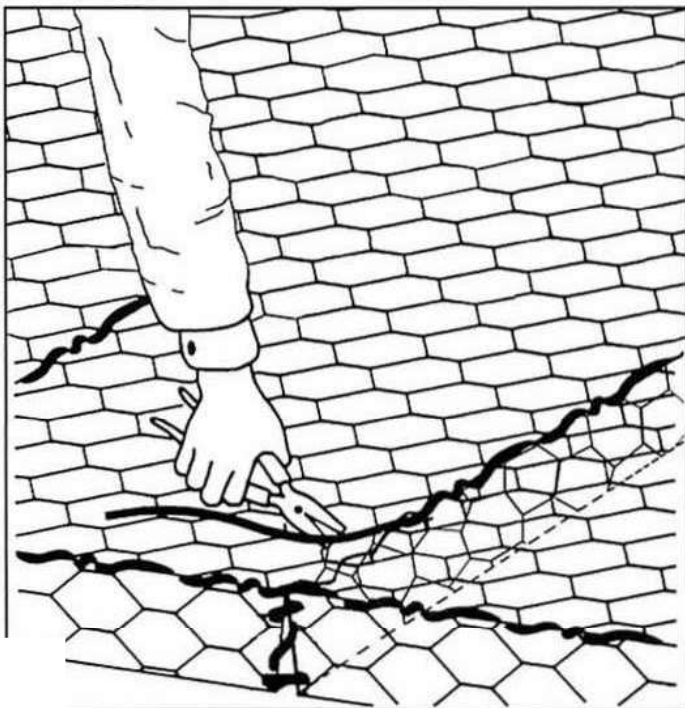
Finally poke loose end inside the mattress.

**TIGHTNESS OF THE MESH AND WIRING
IS ESSENTIAL AT ALL TIMES.**

6. Place the fill material, by hand or mechanically, in the compartments, starting at the bottom if on a slope. The fill should be a hard, durable stone, in size between 80mm and two-thirds the thickness of the mattress, but generally no greater than 200mm.

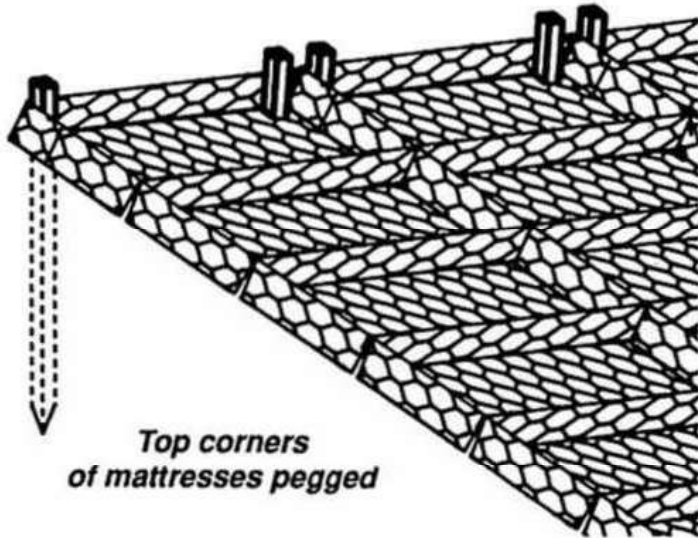
Filling can be done unit by unit, but several units should be ready for filling at any one time.

Before specifying a particular fill material, designers should check that sources of it are available within reasonable distance of the site. When units are to be pre-filled and placed by crane, additional lacing (continuous) is essential along the base of each diaphragm.



7. Slightly over-fill each mattress to allow for settlement. Tack the lid to the corners of the mattress, and then securely wire it to the loops of the sides, ends and diaphragms, using alternate single and double loops, in turn at every second mesh interval. For the lid to diaphragm connection it is necessary to pick up at least one wire of the diaphragm mesh apex with each single and double loop operation. With more than one mattress filled, the edges of adjacent lids can be wired down in the same operation, saving both time and binding wire.

Pegging steep slopes and soft ground



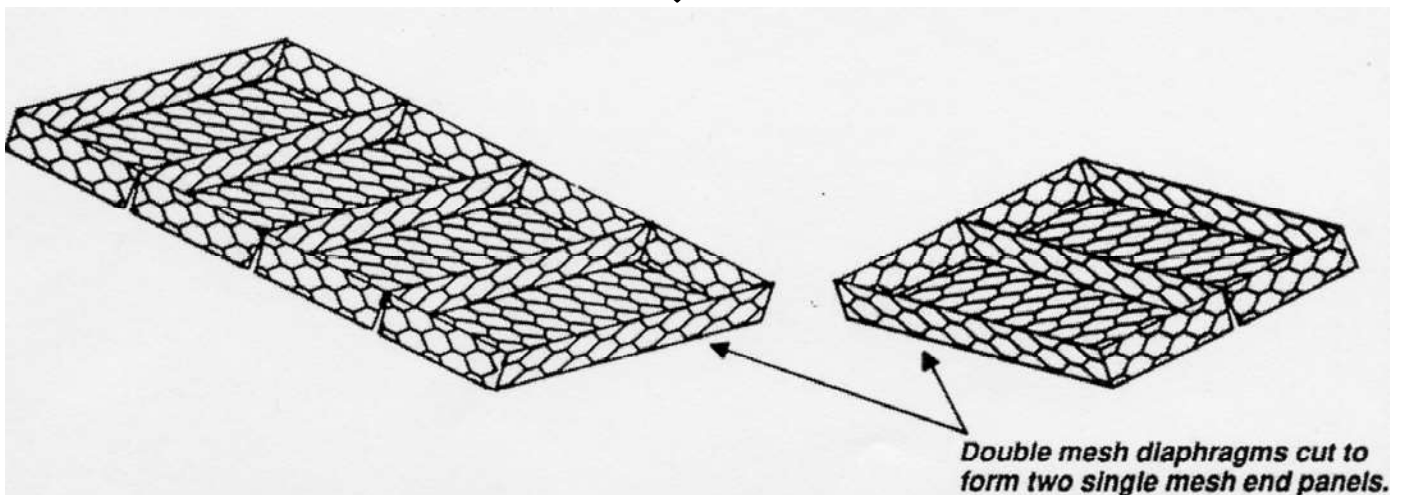
← **8.** Generally, when the mattress is being installed on a slope steeper than 1 in 1.5 or on soft or sandy slopes it should be secured by star pickets or hardwood pegs driven into the ground just inside the upper end panel, at 2.0 centres or as necessary.

This is a temporary measure only, to hold the mattress in position during filling. Once filling and final lacing are completed all star pickets and/or hardwood pegs should be removed so as not to hinder the long term flexibility of the mattress structure.

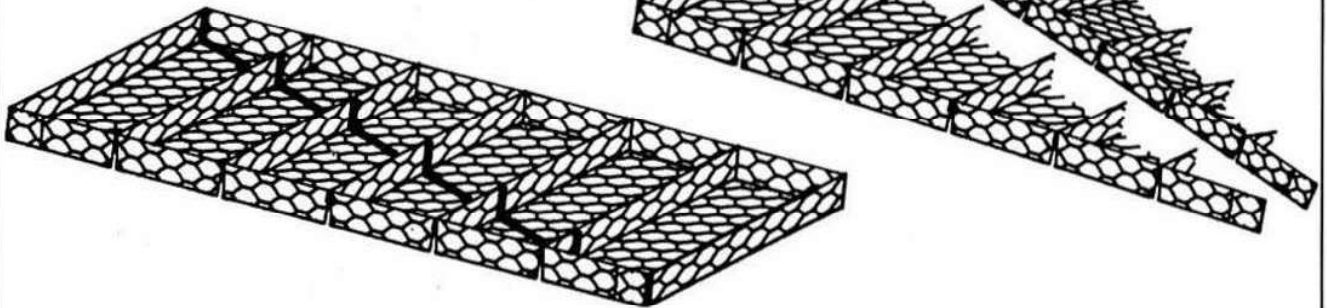
All hand wiring must be done as a continuous and taut lacing operation with single loops and double loops in turn at every second mesh interval.

***TIGHTNESS OF THE MESH AND WIRING
IS ESSENTIAL AT ALL TIMES.***

9. It is often necessary to shorten mattresses to fit the structure being built, by cutting off a number of compartments. The diaphragms are formed with a double thickness of mesh, therefore by cutting along the fold at the top of a diaphragm and removing the bottom spiral connections, a mattress of required length can readily be formed.



**METHOD ONE
CUT AND BUTTED TO FORM CURVE**



All hand wiring must be done as a continuous and taut lacing operation with single loops and double loops in turn at every second mesh interval.

***TIGHTNESS OF THE MESH AND WIRING
IS ESSENTIAL AT ALL TIMES.***

Curves

Reno Mattresses can be cut in two ways to cut difficult curves.



10. The mattress is divided diagonally to form two triangular sections, and the open side of one section is butt-joined to the intact side of the next section. To modify the curve, whole mattresses can be placed between triangular sections.



11. Whole unassembled flat units are placed in sequence and overlapped to suit the curve; the first unit is placed at the end of the adjacent straight, with one side raised and laced to the end unit of the latter.

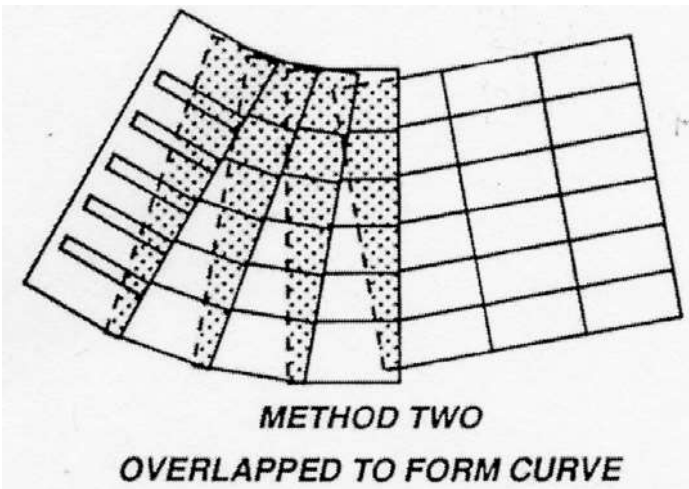
The sides of the units lying on top are raised. The diaphragms are cut along the lines of these sides and pulled upright. Assembly then proceeds as from previous stage.

(A) PLIERS - preferably 6', 8" or 10' long-nose fencing pliers.

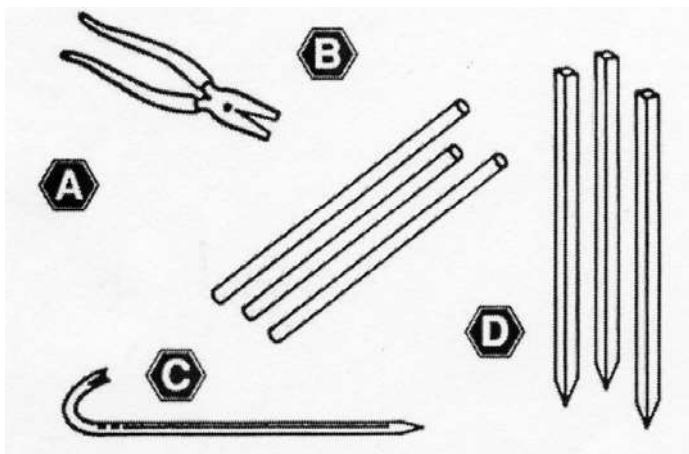
(B) BARS - for pulling lids into place for final closing.

(C) CROWBARS - for closing down lids.

(D) PEGS/STAR PICKETS - for temporarily staking mattress on steep slopes.



**METHOD TWO
OVERLAPPED TO FORM CURVE**



*Please note that this document is an installation guide only. A detailed specification for supply and construction of the Reno Mattress is available on request.
Full details are available on request.*