

Assembly instruction for monotec **R**[®] - gabions

Please read these instructions once completely before beginning with the individual steps.

General Note

Required Experience for the construction of gabions have to be the following conditions:

- safe handling of tools and machines as well as with ladder and scaffold
- Knowledge in the field of accident prevention, work safety and operational safety
- Experience in the field of transportation and use with heavy and bulky components

If the above mentioned required experience is nonexistant or in case of uncertainty, please contact an expert or instruct a specialist company.

Safety Rules

- Set up gabions only on a load-bearing, level surface in accordance with the assembly instruction
- Protective equipment such as protective gloves and safety boots must be worn during all work
- CAUTION! Wire could be sharp and sharp-edged!
- CAUTION! Risk of falling during work.
- Risks have to be assessed and corresponding protections to be taken.

For the assembly of gabions you also need wooden beams or ladders as filling aids which are not included.

1. **Prepare a load-bearing, level contact area according to static requirements.**

In order to avoid bending of the monotecR baskets, the floor mats must be bear on evenly. Foundation according to static requirement.

Note: When manufacturing the subgrade please observe the wall inclination angle

2. **Components of the monotecR -gabions**

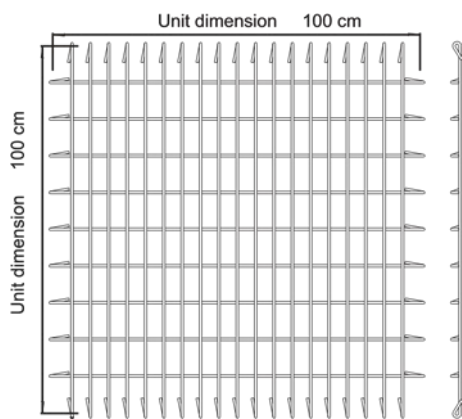


Figure: monotecR grill

Description of monotecR grill-sizes are with regard to their unit dimension

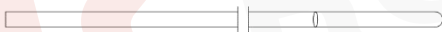


Figure: locking rods to connect the monotecR grills.

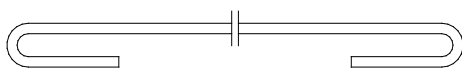
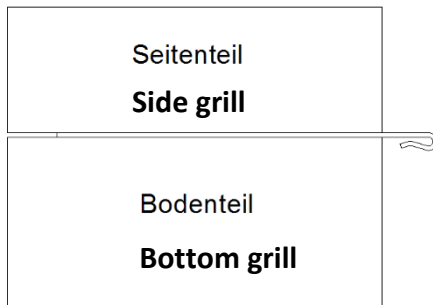
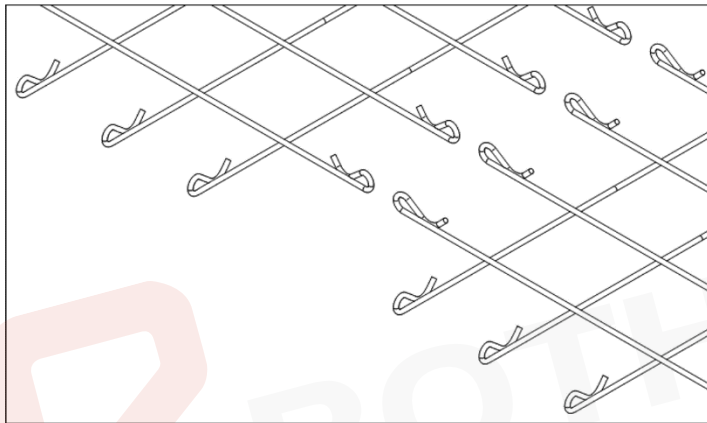


Figure: staying rods for basket stiffening.

3. Lay down bottom and side grills

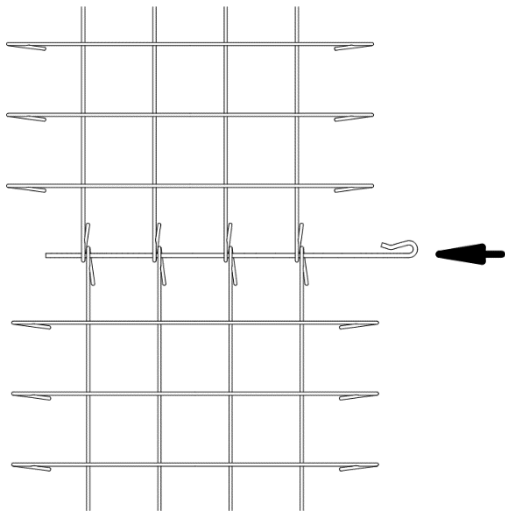


Attention: Eyelets of monotecR grills always have to be on the inside.



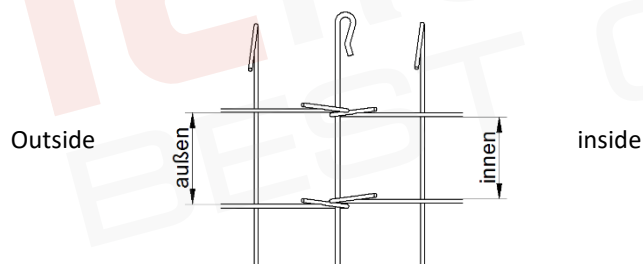
Attention: The grills always have to be mounted in a way that the vertical wires are on the outside.

4. Connect bottom and side grill with a locking rod



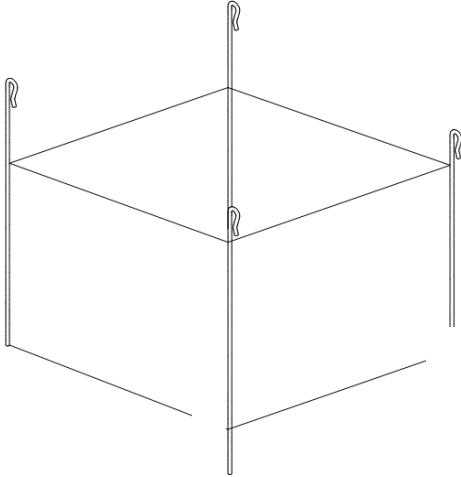
Attention: Be sure that the locking rods are always fitted in the same direction for the entire wall section, e.g. from left to right.

5. When you connect the monotecR side grills, please connect one mesh as demonstrated below:



As result the monotecR side-grill cannot move one another in height.

6. Lift-up monotec^R side grills in position, please note with regard to point 5 - page 4 and thread in locking rods from above.



7. **Attention:** Before threading the locking rods, take care that all necessary other monotec^R grills also are included.
More explanation -> point 10 on page6 (monolithic construction of monotec^R-gabions.)

Attention: Once the gabions are filled it is no longer possible to remove the locking rods.

8. Put in stay rods

Attention: Stay rods must always be fitted diagonally across a mesh crossing.
Optional – Bend the stay rods with a pliers

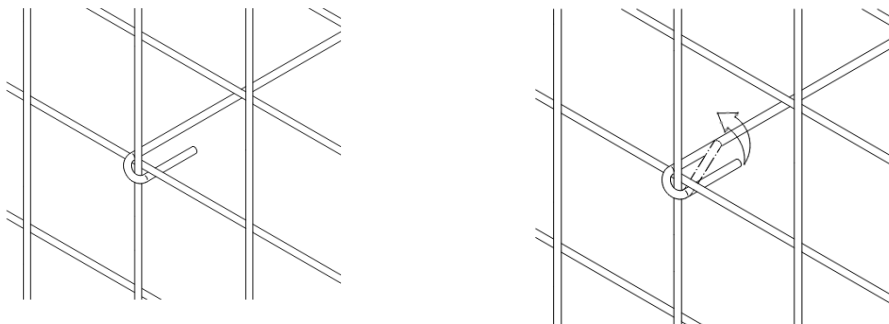
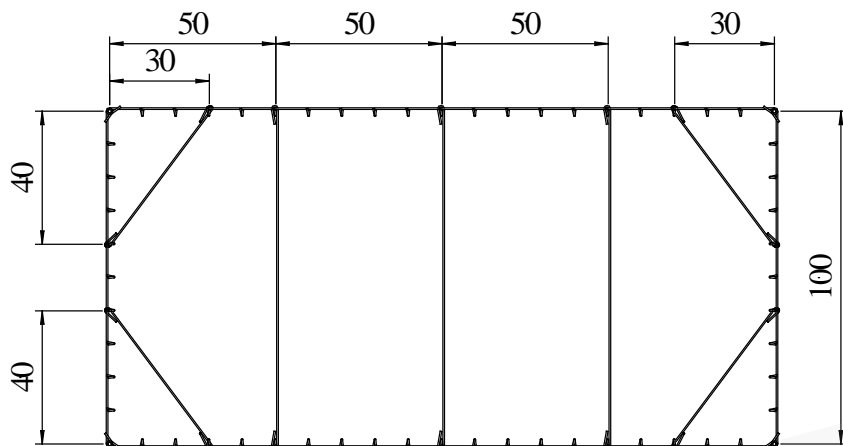


Figure: Correctly bended stay rods

9. Correct position of staying rods

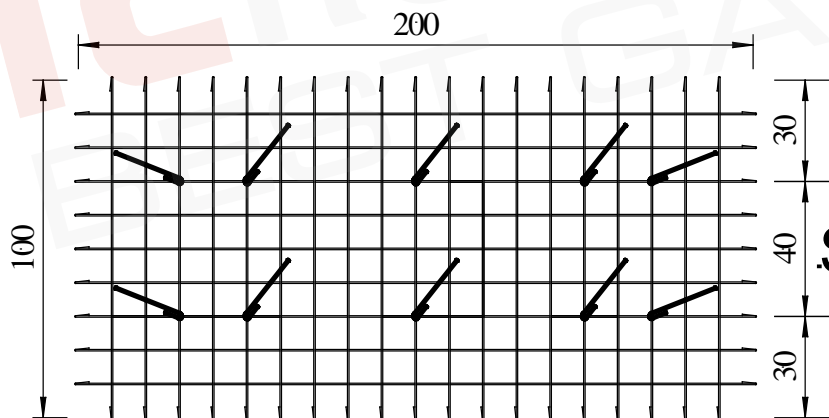
Attention: Staying rods are not only to be seen as mounting aid!
 They also have a static function. Please be sure of correct fitting!

Plan View



Draufsicht

Side view



Seitenansicht

10. Monolithic construction of monotecR-gabions.

A: Horizontal construction:

(**Attention:** For simultaneous, vertical construction, please note point B)

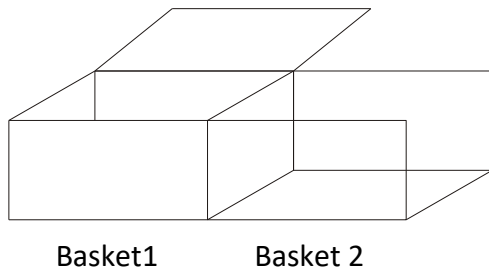


Figure: empty basket 1

The top-grill of basket 1 is fitted and open.
The bottom- and side-grills of basket 2 must be fitted.
Basket 1 can now be filled.

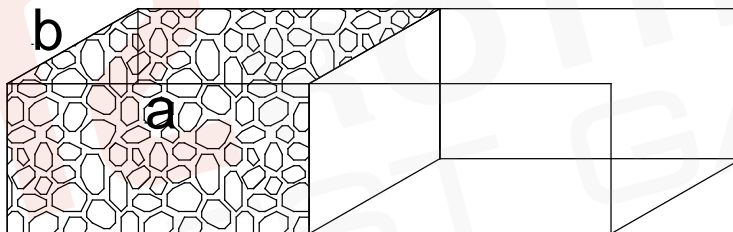


Figure: basket 1 filled

Close the top-grill. Thread in locking rods a + b.

Of course, if the construction site does allow it,
The entire row of empty **monotecR**- baskets can be installed at one time.

B: Vertical construction:

The **monotecR**- basket is fitted together with the lid and the side of the basket above. The basket can be filled.

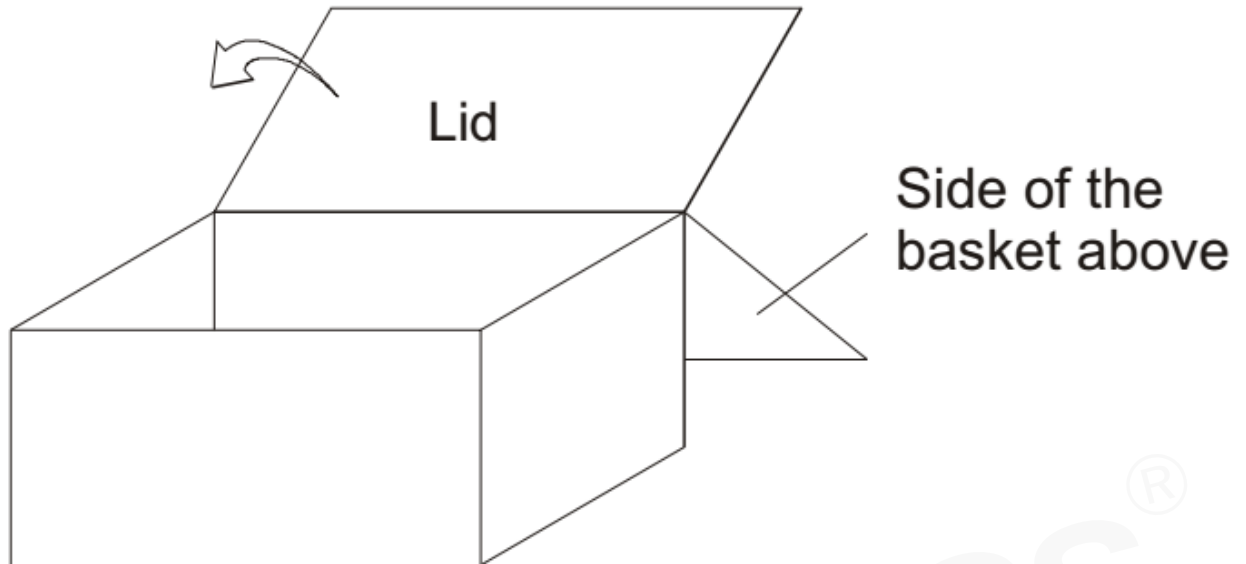
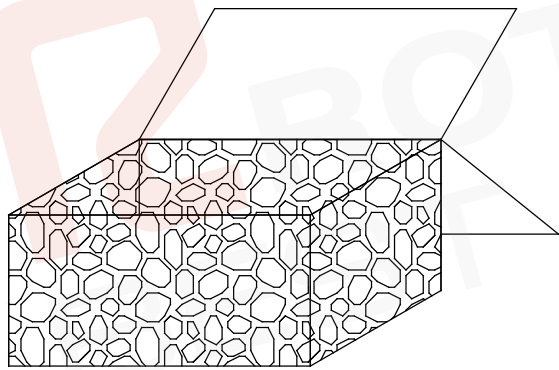


Figure: empty basket



Close the lid of the monotec basket and, at the same time, fit the other three sides.

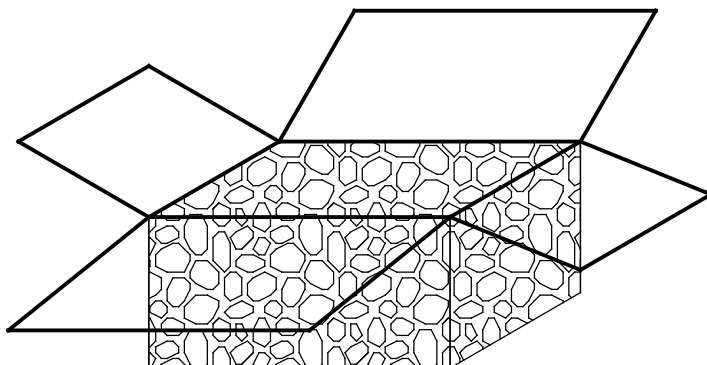
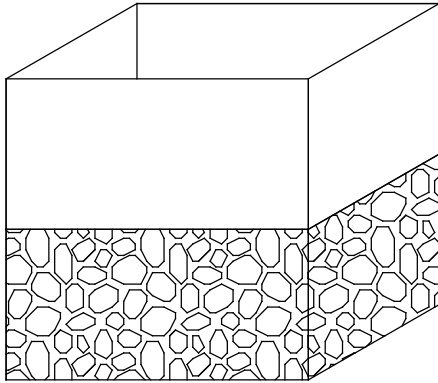


Figure: Lid closed, sides fitted.



Lift the **monotecR** sides into position and connect with locking rods.

11. Fill the monotecR- gabions with sufficiently strong frost and weather resistant stone materials, filling to ensure as few cavities as possible.

The grain size at the front-layer has to be bigger than the mesh size. For the rest filling gravel material - with a grain size bigger than the gap of the front-layer - can be chosen.

The complete stone filling has to be tightly packed without voids - all corners and edges have to be completely filled.

When filling the baskets please ensure that the stay rods do not deform, and that the basket do not bulge caused by deformed stay rods.

Please ensure that the filling underneath the stay rods (especially at edges and corners) is tightly packed without voids to avoid deforming of the stay rods which could otherwise be cause by the filling above the stay rod.

If stay rods have been deformed they must be immediately corrected and straightly reformed.

Please ensure that the stones are filled precisely to the upper horizontal edges and that there are no voids between the filling and the lid. If there are voids or cavities, the load of the grill on top will not be transferred in a force-locking manner via the stone filling, but will put pressure on the wire basket below causing deformation. This too can lead to structural stability problems.

12. Closing the lid

Note: Please ensure that the locking rods are correctly inserted into one another.

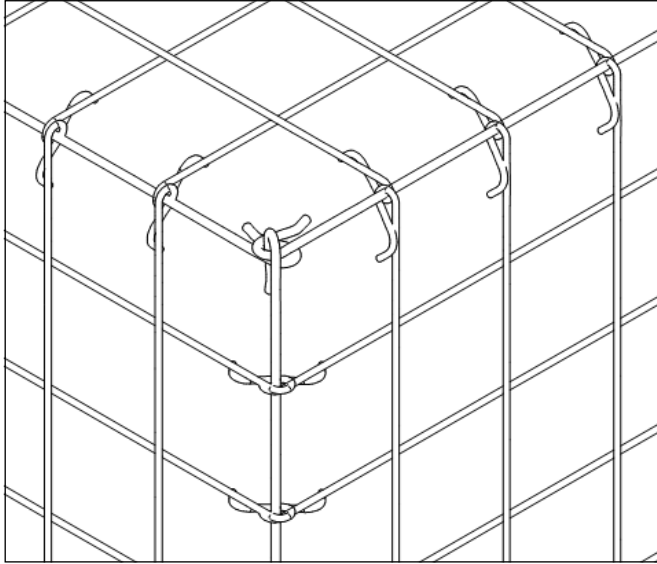


Figure: Correctly interlocked locking rods are immovably tight after filling the basket with stones and normally cannot be removed.

13. Compensating layer

In order to compensate for settlement of fill materials, a compensating layer of smaller stones must be applied to the top of every monotec^R- gabion which is to have further gabions placed on top.

14. Filling aids

In order to avoid bulging when filling the monotec^R-gabion baskets, various simple aids can be utilized.

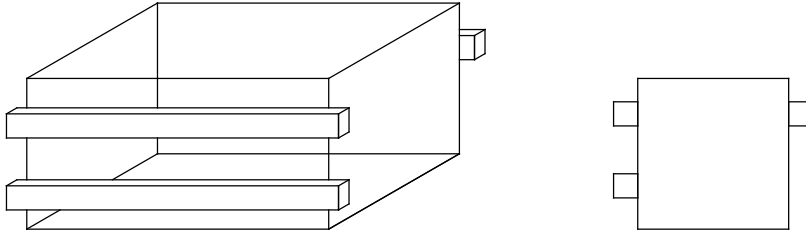


Figure: wooden beams

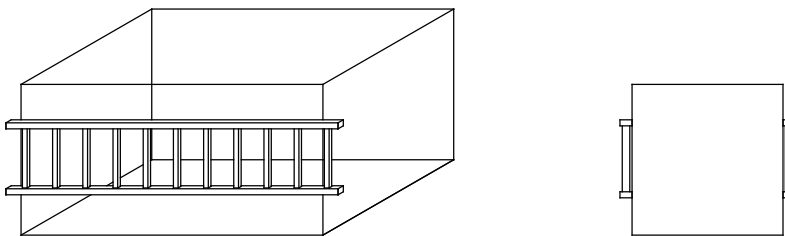


Figure: ladders

These are bound to the vertical **monotec^R** screens and removed again after filling. If you use non-galvanized binding wire, please ensure this is removed as soon as possible after filling as this rusts and may leave unsightly rust marks on the galvanized screen grills. However, as this is only a surface deposit it does not damage the corrosion protection of the screen grills.

Disclaimer

Our assembly instructions monotec^R in word and picture are provided best of our knowledge and belief. It does not relieve the user/contractor of the responsibility to examine the supplied products for their suitability of the intended procedures and purposes.

Application, use and processing of the products are beyond our control and are therefore exclusively in the area of responsibility of the user/contractor.

monotec R® - Gabionen

Individual components for various baskets

Basket size in cm Length x wide x	Grill sizes in cm								Locking rods wire -Ø 6,0mm				Stay rods wire -Ø 5,0mm	
	200 x 100	200 x 50	150 x 100	150 x 50	100 x 100	100 x 50	50 x 100	50 x 50	200	150	100	50	1015	515
200 x 100 x 100	4				2				4	8			6	8
200 x 100 x 50	2	2				2			4	4	4		3	4
200 x 50 x 100	2	2					2		4	4	4			14
200 x 50 x 50		4							4		8			7
150 x 100 x 100			4		2					4	8		4	8
150 x 100 x 50			2	2		2			4	4	4		2	4
150 x 50 x 100			2	2			2		4	4	4			12
150 x 50 x 50				4					4		8			6
100 x 100 x 100					6						12			8
100 x 100 x 50					2	4					8	4		4
100 x 50 x 100					2	2	2				8	4		8
100 x 50 x 50						4		2			4	8		4
50 x 50 x 50								6				12		2