



Assembly instructions for Silent R®

Noise protection gabion with concrete core

These assembly instructions apply only for **Silent R®** made by Rothfuss Best Gabion GmbH & Co. KG

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

General instructions

We would like to emphasize the following points in particular regarding the required experience for the assembly of the gabions:

- Safe handling of tools and machines as well as with ladder and scaffold
- Knowledge in the field of accident prevention, occupational and operational safety
- Persons who are qualified or have prior experience in gabion construction, especially for the Silent R® system.

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

Safety instructions

- Set up gabions only on a load-bearing, level surface in accordance with the assembly instruction
- Personal protective equipment (protective gloves, safety shoes etc.) must be worn during all work according to the applicable regulation of accident prevention.
- CAUTION! Wire could be sharp and sharp-edged!
- Only use scaffolding, fall protection, ladders and lifting equipment in accordance with the relevant HSE regulations and manufacturer's specifications.
- Risks have to be assessed and corresponding protections to be taken.



Assembly instructions for Silent R® Noise protection gabion with concrete core

The **Silent R®** gabion system is a gabion system specially developed for noise protection purposes by **Rothfuss® Best Gabion GmbH & Co. KG**. It combines all the advantages of a gabion wall with the soundproofing advantages of concrete as a building material.

In the following, you will find some information that you should observe when installing our **Silent R®** system.

Please read these instructions carefully before you start the assembly process.

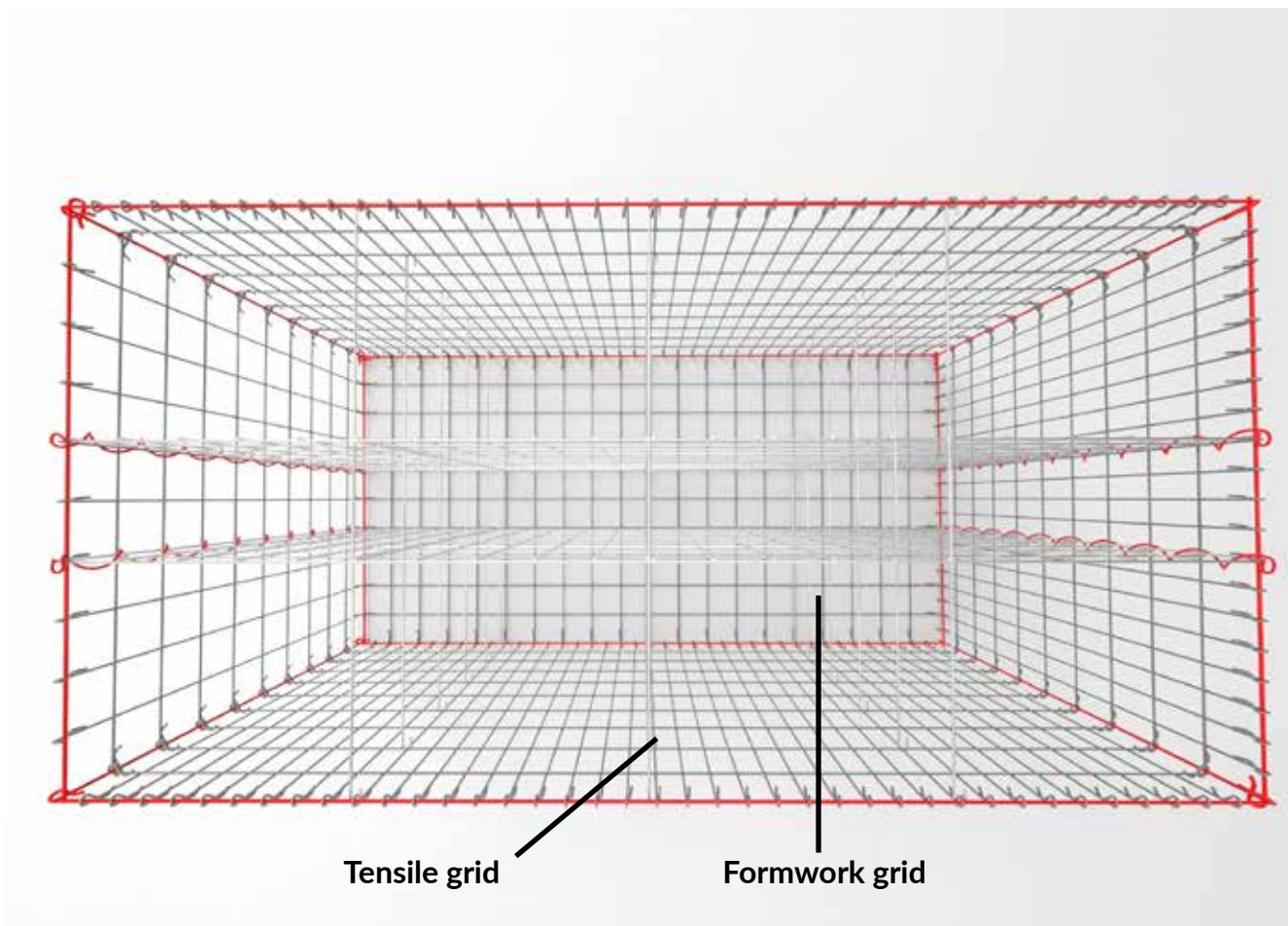


Figure: Construction principle of the Silent R® system



1. Pull up and slit the fleece

Before assembling the individual system components into a gabion, the fleece must be fixed to the inside of the edge wire formwork grid. This can be done by e.g. using C-rings or helical rods (both not included in scope of delivery).

In addition, the fleece must be cut at the points provided for the hooks of the tensile grid to pass through. We recommend a fleece overhang of approx. 10 cm in length and approx. 5 cm in height per formwork grid.

2. Assemble the gabions

Start by pushing the hooks of the tensile grid through the formwork grid and the specially prepared slots in the fleece and hook in the back wall of the noise protection gabion.

The formwork grid must be in contact with the vertical wires of the tensile grid. In this way, the depth of the concrete core is defined. For easier handling, the formwork grid can additionally be fastened to the vertical wires of the tensile grid, e.g. by means of C-rings. Finally, in reverse order, the front formwork grid can be pushed onto the other side of the tensile grid.

Then fasten the formwork grid on each side with a spiral or C-rings in the respective crossing points. The fastening serves only as an assembly aid. We prefer the use of spirals here, as they create a stable assembly construction and thus facilitate the subsequent process of filling the gabion.

Now the front grid is hooked into the hooks and attached to the gabion by means of locking rods.

Connect the bottom, side and back grid with each other using locking rods (for the assembly principle of the monotec **R**[®]-gabion, please refer to the "Assembly instructions for monotec **R**[®]- gabions").

3. Fill the gabions with stones

First fill the two outer chambers with layers of stones. Please make sure that the middle chamber is covered with the help of an appropriately wide scaffolding plank or similar during the filling process. No stones should fall into the middle chamber intended for the concrete core. This would reduce the noise protection effect.

Once the gabions are completely filled with stones, they are again aligned in position before the cover as well as the grids of the second layer are connected by means of locking rods and the gabions of the lowest layer are completed for the time being.



Now all further layers are completed according to the same process and in coupled construction, and filled with stones.

4. Filling in the concrete core

If the gabions have been installed and aligned according to the instructions above, there will now be an empty chamber 20 cm wide lined with fleece in the centre of the gabion wall over the entire construction height, enabling you to provide the gabion wall with a continuous and jointless concrete core.

For this purpose, a fluid concrete (e.g. C20/25, depending on requirements) is poured into the “concrete core chamber” from above. Commercially available concrete hoppers or truck mixers with a concrete pump have proven to be particularly helpful for this purpose.

The chamber should be filled with concrete in such a way that the formation of air cavities is kept to a minimum.

Once the concrete core has hardened, it reduces the noise that passes through enormously and also contributes to the stability of the gabion wall.

5. Start and end gabions

Do you want to cover the concrete core at the beginning and end of the gabion wall and create a stone face? No problem: we will be happy to manufacture the appropriate start or end pieces for you as wall finishes, in order to conceal the concrete core from the side. Just get in touch with us.

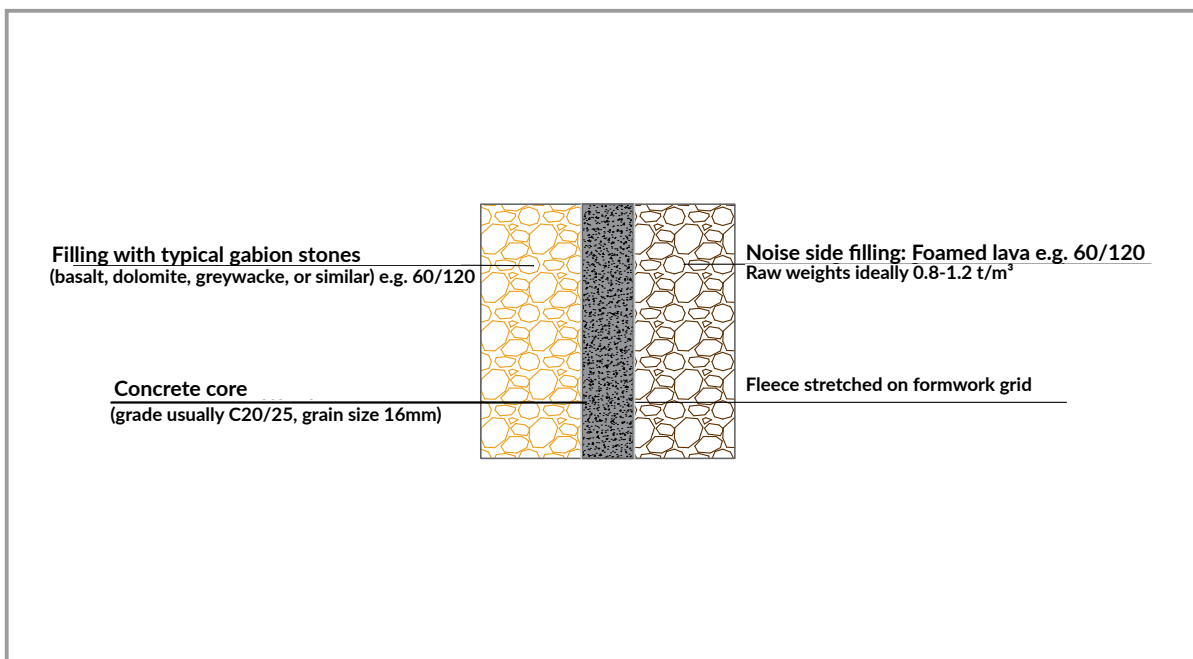


Figure: System section of Silent **R**[®] - gabion with central concrete core and layered facing brickwork on the side facing away from the sound.

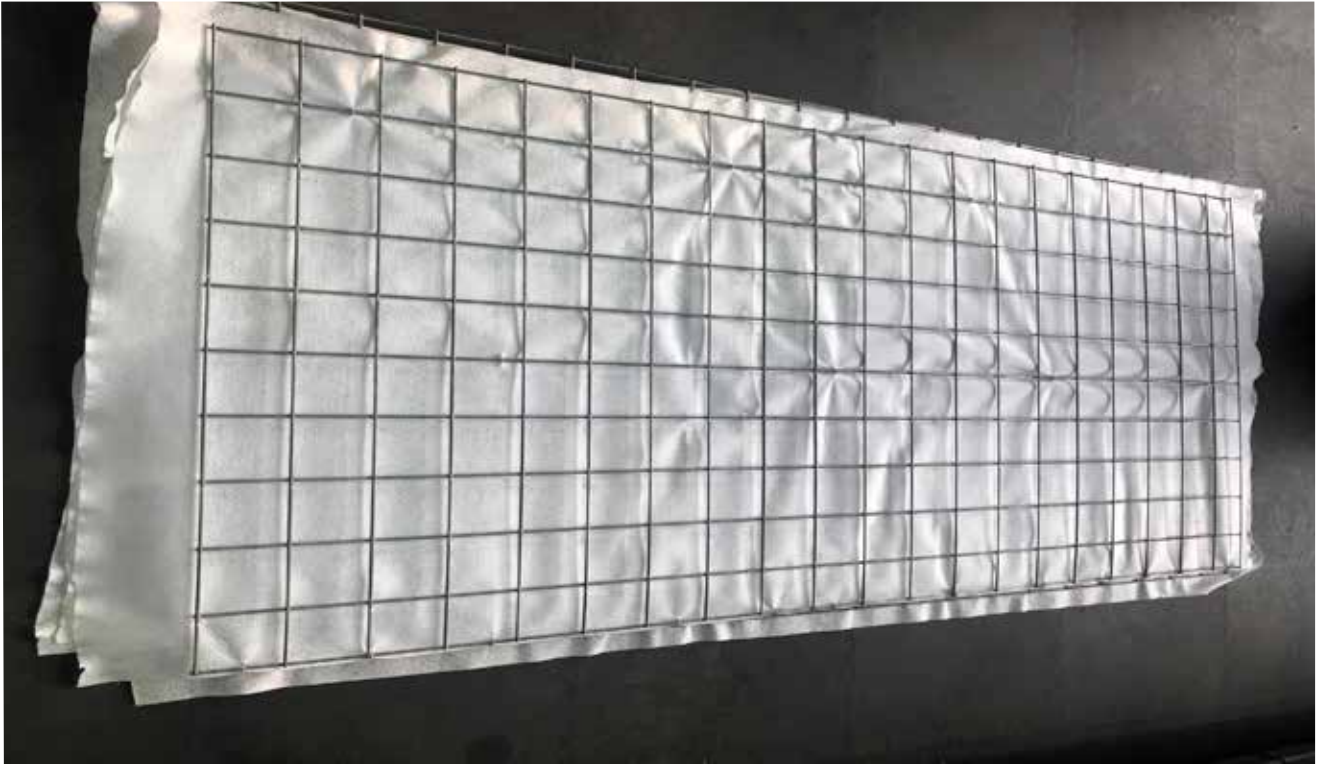
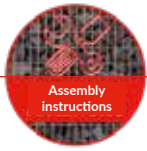


Image: Formwork grid covered with fleece



Image: Assembly of the first layer, connecting the formwork grid



Image: Filling the first layer with stones



Image: Partial filled Silent R® - noise protection gabion



Image: Assembly of the second layer



Image: Almost completely filled Silent R® - sample wall in our exhibition



Image: Filling with concrete

Disclaimer

Our assembly instructions for Silent 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.