

Horizontal insulation

Restoration of horizontal insulation

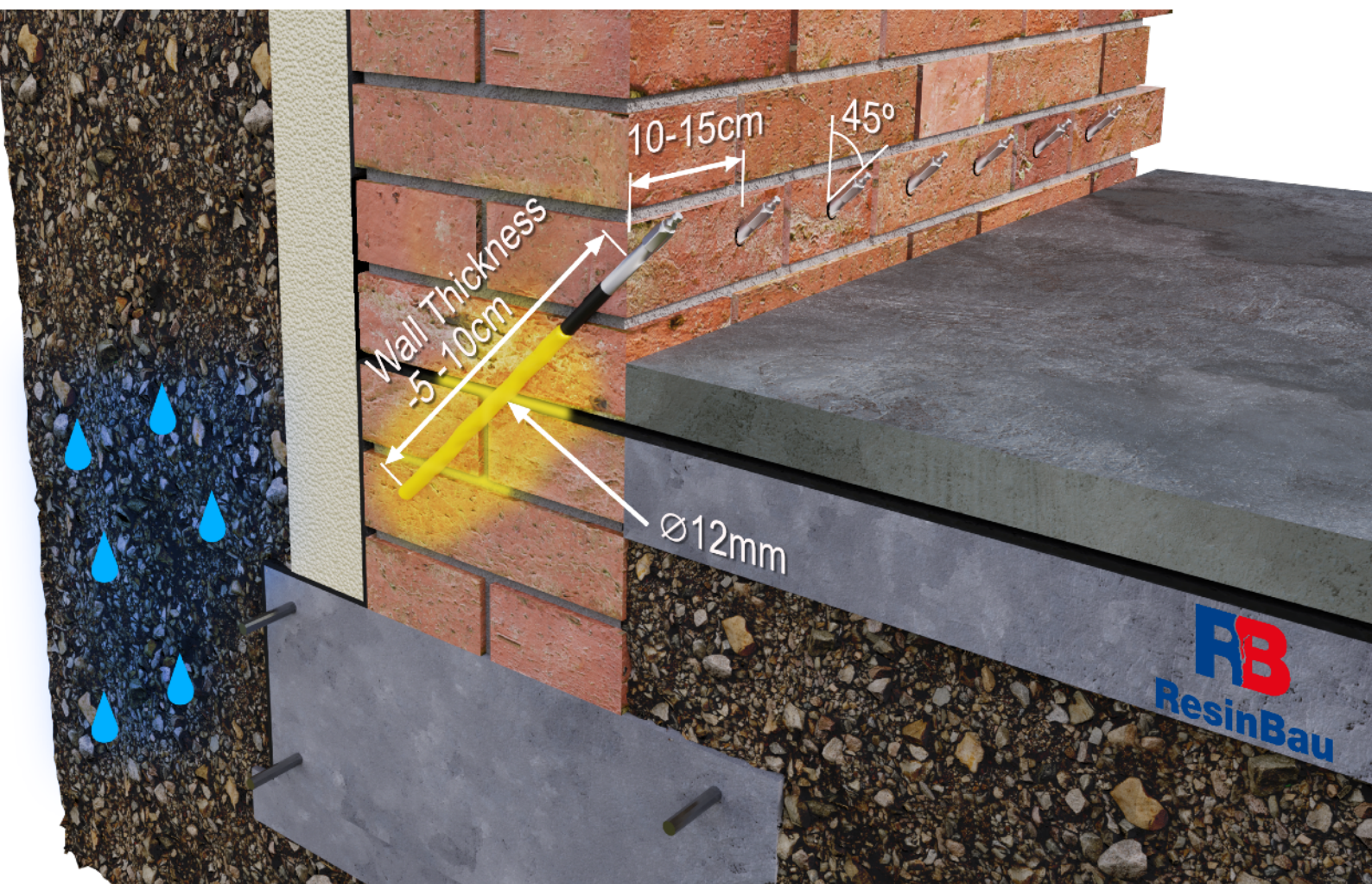
Horizontal insulation restoration by pressure injection method involves saturating the structure of the wall (joints and porous materials) with moisture and water-resistant resin. A carefully executed injection guarantees the wall's tightness for years to come.

Required products:

- ❖ Resin: ResinBau CrackFlex / EasyInject
- ❖ ResinBau CrackOn.5 / optional InjectGrout 4035
- ❖ Injection packers
- ❖ Drills
- ❖ Injection pump
- ❖ Hamm-pack® PI-Cleaner pump cleaner

The graphic shows:

- ❖ Horizontal insulation - single-row

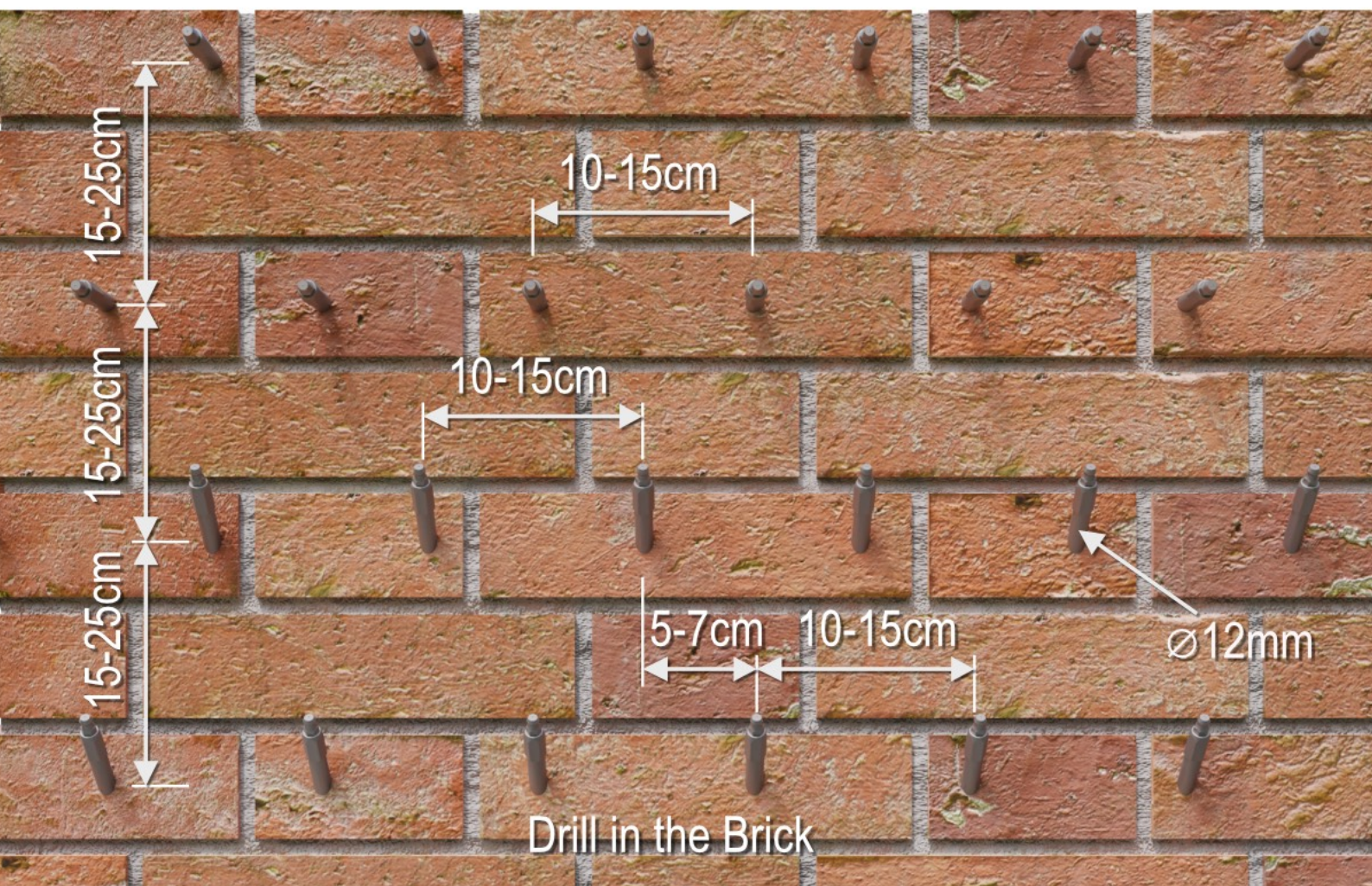


Drilling of holes

- ❖ Injection hole diameter: $\varnothing 12 - \varnothing 14\text{mm}$
Hammpack® PI-SPH 12/110 (PRE / FPPE) injection packer
Hammpack® PI-SPH 14/110 (PRE / FPPE) injection packer
Hammpack® PI-P 12-15/84F (injection up to 60 BAR)
- ❖ hole spacing from 10 to 15cm, we recommend avoiding joints
- ❖ You can use a two-row injection with displacement
- ❖ drilling angle approximately 45°
- ❖ drill depth: wall thickness minus 5-10cm.

The graphic shows:

- ❖ *The first row of packers from the floor is a single-row horizontal insulation.*
- ❖ *The first two rows of packers from the floor are a double-row horizontal insulation. The third and fourth rows are vertical (structural) insulation.*

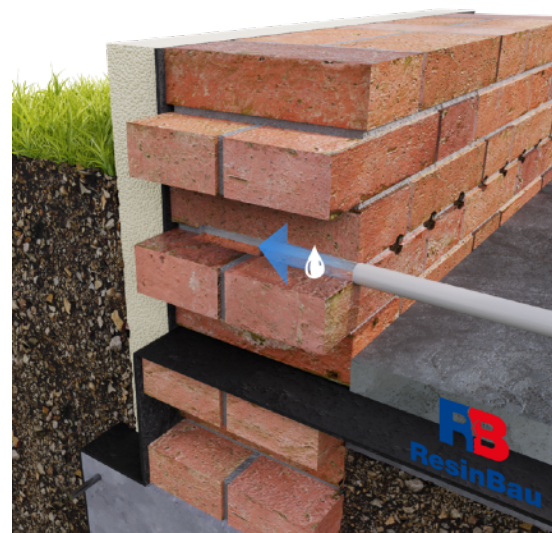


- ❖ If you come across voids in the wall: mark the hole with chalk in places where a void is noticeable when drilling. Use ResinBau InjectGrout 4035 in these void areas and fill them (by gravity/pressure). Remember to dampen the borehole. After 48 hours, re-drill them.
- ❖ For large empty spaces in the structure of the wall, defects, cracks, and incomplete joints, fill them with a non-shrinking ResinBau CrackOn.5 mortar before conducting the injection.
- ❖ Clean the holes before installing the injection packers. Use water, which removes damp debris more easily.

Drilling technique:

As walls with a thickness of 50cm or more are often encountered, to extend the life of the drill bit, the 20cm working drilling rule should be applied.

For example, a 60cm deep hole requires a 12/250/310 drill bit, followed by a 12/400/450 bit, and finally a 12/550/600 bit to complete the drilling.



Injection packers installation

- ❖ Install injection packers:

- If you are using steel packers*:

seat injection packers in injection holes (for example, the Hamm-pack® PI-SPH 12/110 injection packer is under a $\varnothing 12\text{mm}$ injection hole), the length of the packer does not matter in standard injection*.

We recommend installing packers with pre-applied coating magnet (PRE/FPRE). The magnet is delivered separately. This allows for monitoring of the injection process.

- If you are using plastic packers**: we recommend installing an injection packer in only one hole - this allows for monitoring of the injection process.

More information about steel injection packers can be found in our "**ResinBau Steel Injection Packers**" instructions.

** More information about plastic injection packers can be found in our "**ResinBau Plastic Injection Packers**" instructions.

Injection

- ❖ Check if the pump is working properly and "prime" the pressure gauge to protect it from resin clogging*** (Hamm-pack® PI-Saver)
- ❖ Fresh resin principle:

a) **If you are using ResinBau EasyInject resin**, remember that the catalyst is water, including moisture from the air. Watch the processing time, pour a small amount of resin into the pump, and immediately close the tank and the resin. If you have opened a 1K resin, keep it upside down and use it as soon as possible.

b) **If you are using ResinBau CrackFlex resin**, water and moisture also significantly accelerate the reaction time, but mixing triggers the start of the process. Thoroughly mix the two components of the resin and immediately close the tank and the resin. You can find the mixing calculator on the website: www.resinbau.com

Fresh resin has the best properties, which makes it easier to distribute in the structure (the resin is easier to "squeeze" and fill gaps). Take advantage of this.

❖ **Perform the injection "from left to right".**

Install a magnet with a pre-coated application on the injection packer. Start injecting. The best results are achieved by starting with low pressure and gradually increasing it if necessary. Observe if water or resin does not appear in the neighboring packer. If it appears, stop the injection and install the magnet on the "vented packer".

❖ The working pressure should be applied appropriately for the job at hand. You can find more information on this topic in our manual "ResinBau - Pressure and Flow"

❖ After injecting 5-8 packers, we recommend repeating the saturation of these packers with resin

❖ 24 hours after the injection, remove the packers and seal the holes with ResinBau CrackOn.5 mortar

***For more information on maintaining pumps, refer to our manual **"ResinBau Maintenance and Cleaning"**.

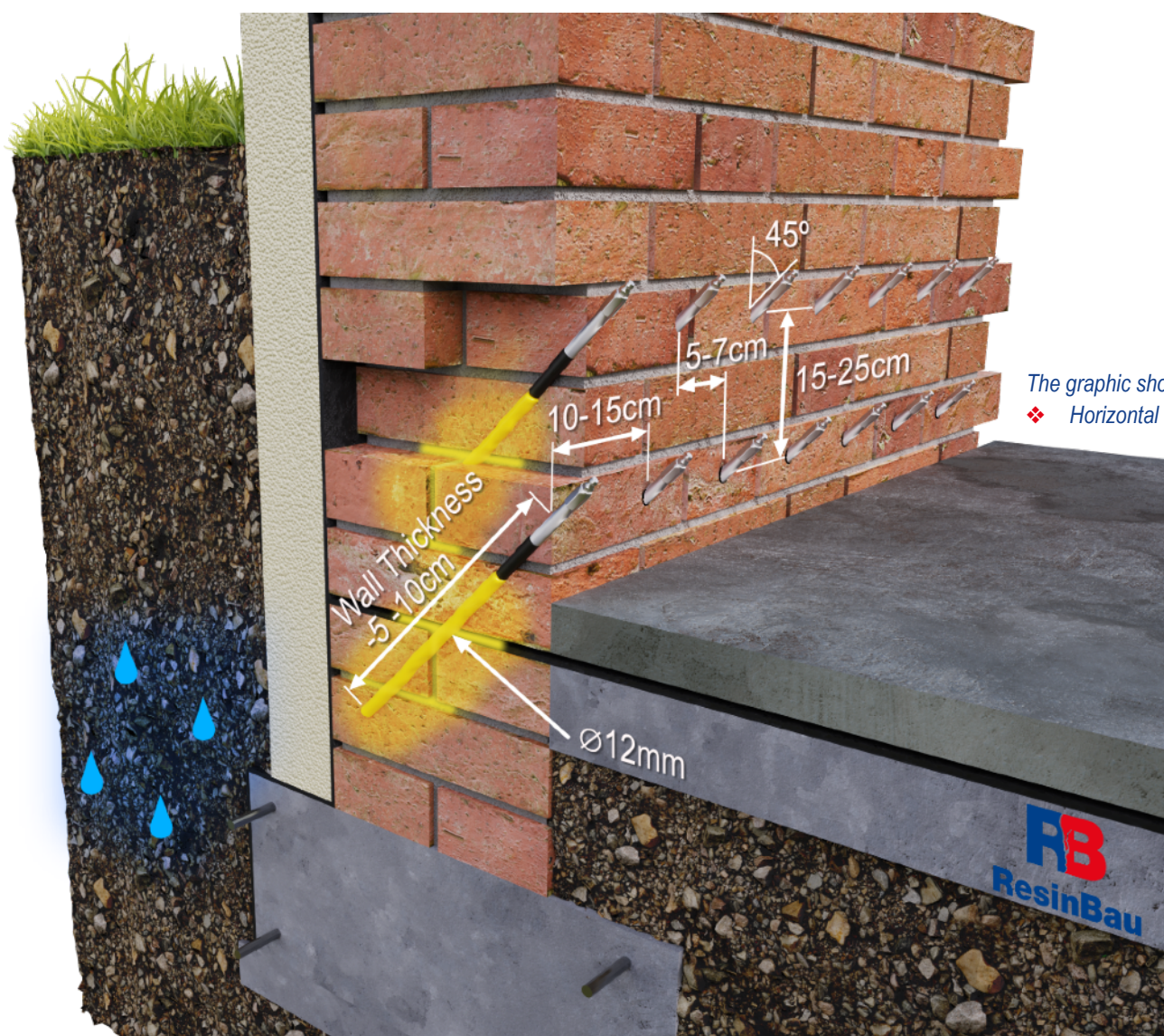
Additional Information:

❖ !! Before starting the injection, familiarize yourself with the technical data sheets of the materials used !!

❖ !! Wear protective glasses, gloves, and clothing. Avoid contact with the skin and eyes !!

❖ We encourage you to familiarize yourself with our other manuals.

If there were any plaster coatings on the wall, they should be removed up to the height of moisture plus 80cm. Use a renovation plaster and vapor-permeable paints! Ensure adequate ventilation of the rooms



The graphic shows:

❖ Horizontal insulation - double row