



GEBRIK INSTALLATION INSTRUCTIONS



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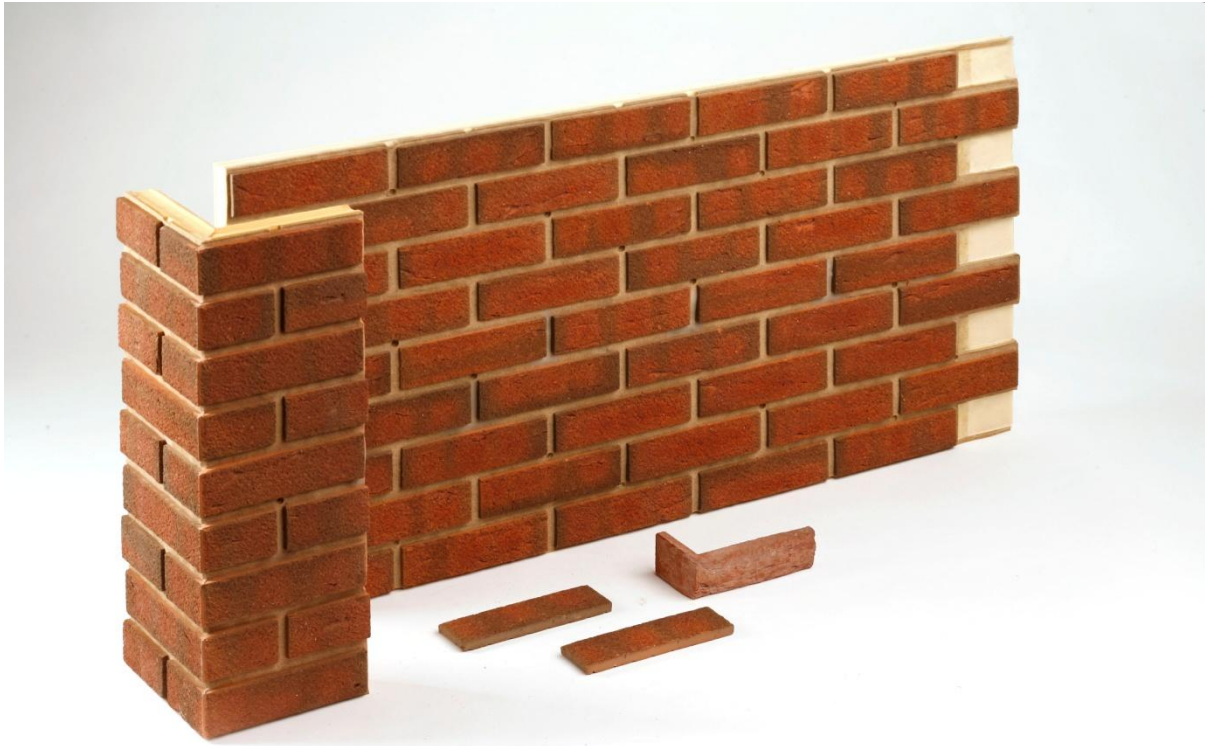
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Introduction

WHAT IS GEBRIK?

Gebrik is an insulating brick cladding system and has been produced in Belgium since 1982. During its history it has been used throughout Europe to clad over 30,000 different buildings. It has consistently been used in the UK since 2002, where to date approx 40,000m² has been successfully supplied and installed.



The system consists of the following:

- Brick panels (Type P, SP, SP1, SP1.5, RP & RP+)
- Factory-produced cut & bonded external corners (HE)
- Site-produced external corners (PUE & ER)
- Factory-produced cut & bonded window jamb & head corners (FE, ST & RE)
- Site-produced window jamb & head corners (PUE & ER)
- Factory-produced cut & bonded column U-elements (U)
- Factory-produced cut & bonded semi-circular and Bullseye window arches
- Additional insulation layers
- Aluminium starter rail
- Plugs and screws
- Single component PU foam
- Tri-component factory batched PU glue
- Cement based glue
- Specific tools and accessories eg foam gun, V-shaped PU cutting knife, PU cleaner, PU foam plug

Gebrik is designed to provide a watertight natural brick finish with improved insulation and is impervious to water, yet will still allow the wall to breathe. It can be mechanically fixed to most walls and is suitable for new build or refurbishment.



Being mechanically fixed, it is less weather dependent and as all panels are frost resistant no climate can be excluded for its use.

Panels are supplied in stretcher bond or stack bond and in the following formats,

	Gebrik UK	Gebrik 61	Gebrik 6
<i>Panel dimensions:</i>	1350 x 675mm	1375 x 688mm	1391 x 714mm
<i>Brick slip dimensions:</i>	215 x 65mm	240 x 65/66mm	240 x 65/66mm
<i>Mortar joint:</i>	10mm	10mm	10mm

The insulating material is polyurethane (PU), produced from Pentane, which does not release CFC or HCFC agents during manufacture. Our PU also has the advantage of not spreading fire, and has a Class 'O' rating for the risk of fire spread as determined by English Building Regulations.

The system has BBA certification, number 07/4403, and has also been certified in Ireland, Belgium, Germany, France, Poland and Czech Republic. It has also been tested in accordance with the CWCT Standard Test Methods for building envelopes, 2005 for weathertightness when applied to a framed substrate.

In accordance with the BBA certificate, all system components must be supplied by Isosystems and the application of Gebrik can only be carried out by approved installers, ie firms who either

1. Employ operatives who have been trained and approved by the Certificate holder, ie Aquarian Cladding Systems, to install the system and who have been issued with appropriate training cards by the Certificate holder.
2. Has undertaken to comply with the Certificate holder's application procedure, which contains the requirement for each application team to include at least one member with a training card

(NB We actually issue certificates rather than cards)

Failure to comply with these instructions may result in the BBA certificate being invalid and consequently invalidating the systems product insurance.



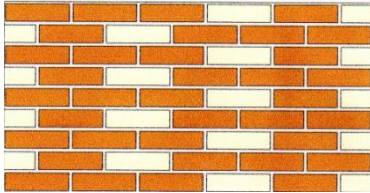
Introduction

COMPONENTS

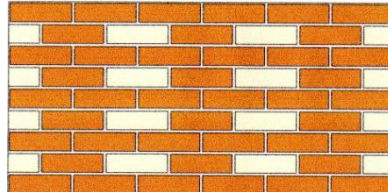
1. Panels

Panels are supplied in stretcher bond (type P, SP, SP1 and SP1.5) or stack bond (type RP and RP+).

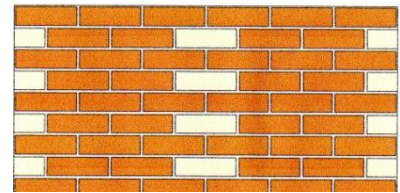
Stretcher bond panels are produced entirely with slips (type P) or with slips removed (SP, SP1 and SP1.5). Type SP, SP1 & SP1.5 panels can be used where panels are to be cut on site, hence reducing the site labour of removing slips from cut panels when maintaining stretcher bonding between panels.



Type SP



Type SP1



Type SP1.5

Panels consist of the following:

i. Insulation



The insulation consists of polyurethane foam, which is bi-component and formed from Polyol and MDI (Isocyanurate), with Pentane gas used as the blowing agent. It is this gas that causes the expansion and gives the foam its insulating characteristics. The Lambda (λ) value of the total system can be taken as 0.030W/mK.

There are many advantages to polyurethane foam, which are:

- It maintains its insulating properties for a long time
- It is impermeable to water but permeable to vapour
- It does not spread fire and melts at a higher temperature than most other insulating materials
- It is rot proof
- It is inert and does not release toxic gases upon ageing

ii. Fixing support



Panels & corners are secured to the substrate by mechanical fixings which are tightened to the panel through the joints between brick slips. The jointing between the brick slips is a mixture of dry sand and high density PU foam created by the pressure inside the mould during expansion of the foam. This jointing gives rigidity to the panel and provides a counter sunk fixing location to ensure the screw heads do not damage the foam. The density of this joint makes it impermeable to water and vapour.

Introduction

iii. Brick Slips



All brick slips are manufactured from frost resistant clay and are through coloured. They have an extremely high tolerance and sufficient water absorption to ensure a good adhesion to the PU foam.

2. Corners

There are 2 options to achieving corners:

- 1) Factory manufactured by cutting and bonding flat panels which are bonded with PU glue, coloured to tone with the brick face. Excess glue is removed mechanically at the factory. The length of either side is a multiple of full and half bricks up to a maximum of 2 ½ bricks and the different corners are as follows:



i. External corner (HE)

Example reference HE 1/1.5 (1 brick/1½ brick), HE 1.5/1.5 (1½ brick/1½ brick) etc. Each side is finished with alternating half bricks spaces and full bricks, i.e. 'open'.



ii. Window Corner (FE)

Example FE 1/06 (1 brick/60mm to close off the panel). These are supplied with one end "open" i.e. alternating courses with a half brick space and the other side is "closed" i.e. will return to the window or door opening.



iii. Lintel Corner (ST)

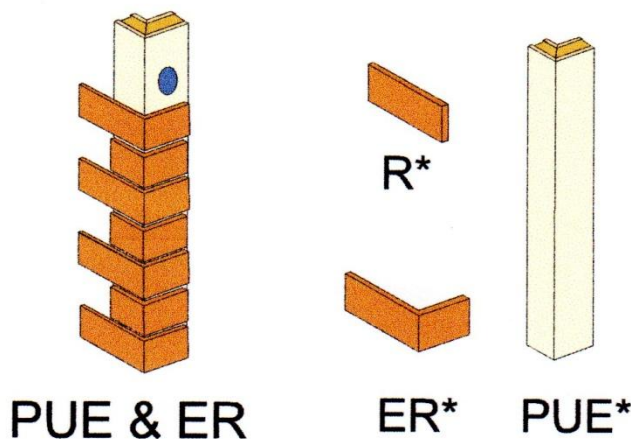
Both sides are "closed" so that a solid course can sit above the window and under the soffit half bricks can abut the frame.

Introduction

iv. U Elements

These are used either at corners to finish off the system to an abutment, or as piers or at columns and are manufactured to suit up to 2½ bricks wide by 2 bricks deep. They should be ordered open (O) to stitch to a Gebrik component or closed (c) if meeting an abutment, eg U (o)2/2.5/1(c)

- 2) Site applied corners are used where the cut & bonded finish is not acceptable to the architect or client due to aesthetics. PU corners (PUE) are secured to the substrate using appropriate fixings and large diameter PU washers. Extruded pistol returns (ER) and slips (R) are glued to the substrate on site using Gebrik adhesive.



3. Fixings

Plugs and screws have been specifically designed and are manufactured in Germany as part of the agreement. It is imperative that no other fixings are used without the consent of the manufacturer.

Essentially, there are three different types of fixings, which are as follows:

- i. *Green Plugs* – suitable for clay and dense concrete masonry where the substrate will allow an expanding plug. They are 8mm diameter and supplied in lengths from 120 – 220mm and must be anchored at least 70mm into the substrate (render is not considered a substrate)
- ii. *Blue Plugs* – suitable for aerated concrete where we do not want expansion. The plug is anchored by “wings”. They are 8mm diameter and supplied in lengths from 160 – 220mm and must be anchored at least 110mm into the substrate (render is not considered a substrate).
- iii. *Spax screws with white collar* – suitable for fixing to minimum 15mm thick exterior grade sheathing boards. They are 6mm diameter and supplied in lengths from 90mm. The screws have a cutting thread similar to a wood screw and the collar is used to spread the fixing through the pre-located hole.

Introduction

Screws

- The screws are in galvanised steel unless otherwise requested (stainless steel available)
- Screws are supplied with TX30 screw heads
- Masonry screws do not have a cutting thread, which enables greater expansion of the plug
- There are two levels of thread in the screw – one to support the panel weight and the other to work with the torque action of the drill.

Plugs

- The plugs are made of nylon
- The plugs have a diameter of 8mm
- The plug is designed to limit over tightening of the fixing screw

4. PU Foam

PU foam is used to ensure the system remains watertight and thermally efficient. It is supplied in 750ml canisters and applied with a special PU pistol around the perimeter of every component to fully seal the system. Approx 4 openings are cast in the lower and upper horizontal edge of each panel to enable pistol access to the chamber.



5. Adhesive

Slips and external pistol returns are applied on site with adhesive. 2 types are available, either tri-component PU based glue, batched and supplied in 3kg boxes or cement based glue supplied in 25kg bags.

PU glue has traditionally been used and consists of a brown liquid, white liquid and white powder. The 2 liquids are mixed and the powder is added to produce a thick workable paste. Approx 25no slips can be applied using 1no 3kg box, which hardens after approx 30mins. **NB PU glue will fail if it comes into contact with water or wet surfaces.**

Cement based glue has recently been tested and added to the range and is mixed on site with water. Approx 25no slips can be applied with 1kg of cement and mixing instructions must be followed to ensure correct consistency. **NB though less dependent on dry conditions care should still be taken to ensure the adhesive is not too wet and it can only be applied in temperatures of 5⁰ and rising to avoid frost failure.**

Introduction

6. Accessories and Tools

Generally specialist tools are not required to enable the installation of Gebrik and the following list of tools and equipment has proven to be sufficient in most cases:

Tools provided by the installer

- Tools for levelling and ensuring surfaces are flat (eg straight edge of 2m, spirit-level, transparent tube filled with water,...)
- Bricklayer's weighted plumb line
- Chalk-line
- Measuring tape
- Hammer drill/ drill (P=620 W; Ødrill= from 4-24mm)
- Power screwdriver with a torque limiter (P= 4 Ah; 12 V)
- Work station (2 feeds with a panel 1.4 x 0.70 m)
- Grinder with Ø230mm cutting disc (P=2100 W; U=6000tr/min)
- Angle grinder with Ø125mm cutting disc (P=1020 W; U=11000 tr/min)
- Drill with high torque and low speed to mix the glue (P=500W; U=2400tr/min)
- Mixer, Ø50mm
- Plasterer's knife 6.5cm wide
- Mason's trowel, 5-6cm wide
- Hammer
- Knife
- Shims or packers up to 10mm
- Timber hand saw (to cut the PU-foam)
- Hammer-plugs Ø8mm-L=50mm for fixing the starter-rail
- Small nails (to position site applied brick slips during the hardening of the glue)
- Fine gloves (for protecting hands from PU adhesive)

Tools to be purchased with the GEBRIK-system

- PU-Pistol for injecting PU foam into the chamber
- PU-Cutter to recut the injection chamber in site cut panels
- PU-Plug to close the PU-injection hole after foaming
- PU-Cleaner to remove PU from face of brickwork



Installation

PREPARATION

1. The Substrate

i. Fixings

Identify the type of substrate to ensure the correct fixing type and length will be used, ensuring there is sufficient carrying capacity for the proposed wall plugs.

ii. Condition of Substrate

Assess and prepare the condition of the substrate.

a) For concrete/clay masonry:

- 1) If the masonry/render is crumbling or the joints are porous then a bonding test should be undertaken should there be any doubt.
- 2) Remove any loose or flaked masonry/render.
- 3) Any unevenness under 10mm over a 2m straight edge and the surface area of which is less than 1/3 of the surface area of the Gebrik element need not be filled or removed. (In such instances wooden or plastic packers between 2mm and 10mm should be used to ensure flush panel abutment).
- 4) Any unevenness between 10mm and 40mm are treated by either of the following methods:
 - Render
 - Lathe and plywood or cement particle board
 - Injection of mono component PU foam
 - Use of PU or PE panels with a density greater than 40kg per metre³
 - Remove projections by mechanical means
- 5) Extreme rough cast render may need to be smoothed with appropriate mechanical equipment to ensure a large contact area.

b) For timber and steel frame:

- 1) Ensure the Gebrik system is applied to a minimum 15mm waterproof sheathing i.e. wood/cement particle board

2. Projections

Ensure that any masonry cills, copings, etc project 40mm from the face of the system ensuring that the drip projects a minimum of 20mm from the face.

3. External fittings and fixtures

- 1) For overcladding existing buildings, all fixtures fastened to the façade i.e. rainwater pipes, aerials, vent systems, etc must be removed prior to installation of the system.
- 2) When fastening any external fitting or fixture ensure that they are anchored to a sufficient depth in the substrate. If in doubt guidance must be sought.



Installation

INSTALLATION

1. Determine Starting Level

Before starting any fixing determine the start position around the whole building. This is achieved as follows:

- 1) Gauge down from the head of the ground floor window or door
- 2) Ensure the datum level is at least 200mm lower than the finished floor surface to prevent cold bridging between the rail and floor
- 3) Set the level at each corner of the building and mark with a chalk line two levels 60mm apart in anticipation of fixing the aluminium rail between the lines.

N.B.

- When applied adjacent to a terrace ensure a distance of 20-35mm between the two interfaces to allow for movement. The gap should be filled with a suitable sealant.
- When applied adjacent to bituminous ceilings i.e. for flat roofs, the rail must be fixed above the waterproofing (concave moulding) so that the latter is not damaged.

2. Starter Rail

Preparation

- 1) Where the cladding starts below ground it is not necessary to use a starter rail.
- 2) The system can be “buried” by up to 140mm (i.e. two brick courses)
- 3) The substrate should be protected from damp ingress below ground prior to application of Gebrik (below ground, Gebrik is not a damp proof barrier).
- 4) Care must be taken not to pierce any damp proofing by drilling. It is recommended that no wall plugs are inserted in the part of the panel, which covers the damp proof membrane.

Installation

The rail is not a load bearing support for the system. It is used to act as a starting level so great care must be taken when fixing the rail, as all future levels will be determined from it. It also acts to protect the system from damage by either direct or indirect UV rays and rodent attack.



- 1) Having determined levels, fix rail at 600mm centres using 6mm diameter plugs and screws.
- 2) Mitre the rail on site for corners as necessary.
- 3) If the rail is used below ground do not use any form of flexible seal as this will break down in time, allowing water to climb up between Gebrik and the substrate.

Installation

3. External Corners

The first component to be fixed is usually an external corner. This will set a vertical measurement so that combined with the horizontal starter rail a right angle is created, ready for the first full panel.

- 1) Mark the height of the first row with a chalk line.
- 2) At the bottom of the element remove sufficient PU foam so that it fits flush over the starter rail.
- 3) Before applying the first element, ensure the rail is free of dust, oil and other pollutants and then run a bead of PU foam along the top of the rail and along the projecting angle of the rail. This prevents water being drawn up and behind the system.



Corners are either supplied factory-produced (cut & bonded) or site-produced from PU corners, pistol slips and glue. The principles are essentially the same however please note the following:

For factory-produced corners

- 1) Remove the 5mm overhang of sand/PU so the base of the element starts with brick slips
- 2) Sit the element on the rail and against the corner of the building and using a spirit level to position the element correctly, drill through the element and into the substrate. Note the following:



- *for timber frame use the appropriate fixing but tap it into position in the Gebrik element before positioning. The screw has a cutting thread so position the element then drill the fixing into the sheathing, pulling the element into position.*
 - *for aerated concrete do not use a percussion drill*
- 3) The drilled hole must be at least 15mm deeper than the plug because the screw is longer than the plug. The deeper hole also compensates for any dust being pushed into and filling the drill hole. (To keep the hole as free of dust as possible push and pull the drill during drilling – but remember to keep the drill at right angles to the element!)

Installation

- 4) Fix all elements from the centre to the corners by first tapping in the plug and screw. Then fix the element to the wall making sure that the appropriate torque setting is applied. Care must be taken to neither over-tighten, as this may damage the sand/PU joint between the bricks, or undertighten as this may lead to subsequent vibration and breakdown at the fixing position.
- 5) Ensure the corner element is correctly in position using a spirit level then unscrew and rescrew the fixings as appropriate to keep the element in its desired position, using packers if necessary.
- 6) Repeat by inverting the next component to castellate the corners by half a brick. This will maintain correct stretcher bond with perpendicular joints aligning on alternate horizontal courses. (NB The photo is for illustration only. Typically Gebrik is built up in horizontal rows, similar in principle to brickwork)



For site-produced corners



- 1) Typically 85 x 200mm PU corners (PUE 85/200) are used at external returns when using Gebrik UK and 85 x 85mm (PUE 85/85), when using Gebrik 61 (as photo). As with factory-produced corners, sit the PU corner on the rail and against the corner of the building. Using a spirit level to position the element correctly, drill through the element and into the substrate. Use the fixings provided for the panels but also use a PU collar to spread the fixing head across a larger surface area of the foam (without the PU collar the fixing head will penetrate the foam and will have no integrity).
- 2) Once the PU corner is in place panels are aligned and then pistols are applied using cement based glue once the corner has been foamed at the interface with the adjacent panels or abutments.

Installation

4. Installing the first panel

1. Repeat steps 1, 2 and 3 as fitting a factory-produced corner.
2. Position the panel so that it abuts the corner and starter rail. Use a spirit level to ensure good abutment and alignment between the two elements and ensure the bond is maintained.
3. Drill through the panel into the substrate using the pre-located fixing positions. Apply an appropriate number of fixings in accordance with the manufacturer's instructions. Once again fix the panel from the centre to the corners across the whole surface taking care not to over or under tighten the fixings against the pre-located countersunk fixing position. If the installer considers that, in spite of the number of wall plugs stated by the manufacturer, the panel is not firmly fixed then additional wall plugs must be used.
4. Use packers as appropriate to ensure that panel is correctly positioned and tighten fixings with appropriate torque setting.
5. When applying the next row of panels ensure the foaming chamber is free of dust and debris.



6. Repeat the above steps to apply further panels and increase coverage one row after the other. This can be done either in stretcher or stack bond. (See notes regarding Bonding Principles).

Installation

5. Openings

As with external returns, jambs and soffits can be supplied either factory-produced or supplied for site-application using PU corners, pistol external returns and slips to suit the depth of the reveal.

Installation of the window reveals

1. Ensure that before the Gebrik component is installed, a gap of 10mm is left between it and the frame so that a compressible sealing strip can be applied to ensure no water can penetrate at the interface.
2. Where applicable, ensure any outward opening windows are not obscured by the component. If so, remove the appropriate thickness of foam up to a 30mm maximum reduction.
3. Start at the cill and work up by first fixing the corner elements in place with at least 2x2 wall plugs, ensuring that the whole surface area is in contact with the substrate. If a soffit reveal is required, make sure that it is in place before applying the last corner element.
4. Fix the soffit reveal in place using the same method as fixing jambs. Be aware when drilling of any reinforcements in the existing lintel.
5. If necessary, cut the height of the soffit reveal to ensure that the top edge lines up with the horizontal joint of the adjacent stretcher bond panels (unless it's part of a continuous string course)
6. Fix the remaining corner and soffit reveals.
7. Apply the compressible seal then the silicone sealant between the element and frame.
8. Site applied reveals are applied in the same way as external corners and note that pistols and slips (if required) must be cut to length on site. When applying soffit reveals on site the pistol returns should be supported with a former during curing to ensure sufficient pressure and adhesion.

6. Movement Joints

Gebrik will have negligible movement however movement joints should be used to follow the substrate, which will ensure the facade and substrate/structure move together.

Where movement joints are required a 10mm gap is left between components which is subsequently filled with a compriband strip and then covered with a suitable mastic sealant, coloured to match the mortar.



Installation

7. Maintaining Brick Bond

Bonding of panels varies according to their format, eg Gebrik UK, Gebrik 61, etc so ensure you are familiar with the difference between panels. Note that within each format each panel is the same, though the type of 'stitching' will vary between formats. For example Gebrik UK panels must be staggered vertically by half a brick, to maintain a stretcher bond where perpendicular joints align every other horizontal course.

However in the Gebrik61 format, either end is different i.e. the first brick on the top row is a full brick with that row finishing with a space for a half brick. The next course will start with the half brick space and end with a full brick and so on. To maintain stretcher bond always make sure the panel is aligned so that when two elements abut either two half bricks or two whole bricks should meet.

As with traditional brickwork, it is required aesthetically to line up perpendicular joints wherever possible. Generally however buildings do not co-ordinate with brick dimensions therefore cutting of panels to maintain a bond pattern will be necessary. Essentially this is done to the client's/architect's approval but the best way of reducing the overall effect of non-co-ordinating brickwork is by inserting a closing bond typical of traditional brickwork.

Note that it is easier to reduce the length of the corner element and work with full bricks on a panel, ensuring that the length of the element is never less than 180mm.

Cutting Elements

To maintain the appropriate bond, cutting of elements will be necessary.

Tools required:

- Disc cutter with Ø230mm diameter diamond-tipped blade suitable for clay bricks for cutting panels
- Disc cutter with Ø125mm diameter diamond-tipped blade suitable for clay bricks for removing bond between slip & PU/sand
- 65mm wide trowel or steel spatula for removing brick slips
- V-shaped PU cutter for creating foam chamber

Cutting the element

- 1) Measure the element and mark a line in preparation for cutting. Ensure there will be no gap between cut and uncut elements.
- 2) Make the cut with the Ø230mm disc cutter ensuring that the blade is at right angles to the element's surface.
- 3) Using the V-shaped tool form a channel by removing the foam along the perimeter of the element to create a foaming chamber.



Installation

- 4) Either fix the element to the substrate or place it securely on the work station.
- 5) Once the panel is firmly fixed to the substrate or on the work station, using the disc cutter remove the sand/PU surrounding the half brick with the Ø125mm disc cutter . Ensure care is taken not to remove PU foam by cutting too deep.



- 6) Once the bond between the brick slip and sand/PU is broken, slide the trowel/spatula immediately under the slip to break the bond with the foam. Prise away the slip carefully to leave as much foam as possible on the panel.

8. Foaming

This procedure is one of the unique features of Gebrik. The system is typically sold as an insulating and impervious cladding solution so it is imperative to apply foam correctly, which will avoid water penetration or warm air leakage.

The Foam

The single component polyurethane foam has been designed specifically for the Gebrik system and it will expand to twice its volume. The first increase in volume is due to a CFC-free gas and as soon as the foam leaves the gun it starts creaming. The second volume change is a longer one and is created by a chemical reaction between the Isocyanurate part of the foam and humidity of the air. Because of this delayed reaction, particular care should be taken when injecting the foam into the chamber to avoid overfilling.

The Injection Chamber

The chamber is designed to prevent foam leakage at the front but allow foam to escape to the back of the system. This acts as a supplementary binder and packer.

Any elements cut on site will need to have a channel formed by the installer to create the chamber. A special PU cutter tool is available for this process.



Installation

Foam is injected into the chamber through pre-fabricated holes along horizontal abutments and through the foam section of panels where slips are applied at vertical abutments.

The Injection Tool

The foam pistol gun is a robust tool with a progressive shaped nozzle and is equipped with a continuous adjustable flow system.

The injection hole must have an 8mm diameter.

Always keep a filled canister on the gun.

Do not dismantle the gun but ensure the nozzle is kept from blockage by cleaning the nozzle of the gun daily, using recommended cleaning products.

The Plug

To ensure that foam doesn't leak from injected holes, hard plastic Gebrik PU plugs are available to close the hole. These can be cleaned and reused.

Application

Foaming should be carried out at the end of every day, after panels and corners have been firmly secured (the expansion of the foam will push panels apart or away from the substrate!). This will ensure that the system is watertight immediately and will avoid later confusion over areas that may (or may not!) have been foamed.

- 1) Use foam at a temperature between 5°C and 35°C.
- 2) Shake canister from side to side (at least 20 times) before use and repeat regularly.
- 3) Position the canister on the gun and test to ensure the appropriate control, adjusting the nozzle as required. Experience shows that better control is attained by reducing the opening of the gun to a minimum and increasing the injection time.
- 4) To access the horizontal chamber penetrate the pre-located holes at horizontal panel abutments with the pistol nozzle. Apply the foam left and right within the hole, taking care to fully fill the chamber but minimising excess foam expanding out of the joint. The chamber is full when the foam comes out of the adjacent holes.



- 5) Plug the hole where injection has taken place with PU plugs to ensure the foam expands within the chamber. **Do not force** the plug into the chamber as this may leave an area without foam.

Installation

- 6) To access the vertical chamber, force the gun nozzle between panels at the point where slips will be applied.
- 7) Leave the plugs in position for a minimum of 4 hours.
- 8) After foaming, re-tighten the fixings
- 9) Cut and remove any excess foam with a sharp knife. Remove any dried PU from the face of the bricks using PU cleaner.
- 10) Typical consumption is approx 8m² per 750ml canister for masonry and 15m² for sheathing boards i.e. 45-50 litre free foaming. Injection time can be affected by atmospheric temperature and humidity but is generally approximately 4 seconds.
- 11) Store bottles upright at approximately 20°C.



9. Gluing of Brick Slips

When stretcher bond is required, the system has been designed to “stitch” panels together by gluing a brick slip on alternate courses where panels abut, using either PU-based glue or cement-based glue.

Insufficient control of on-site adhesion will potentially lead to delamination of slips so care must be taken to ensure the following instructions are strictly adhered to.

PU-Glue

PU-Glue is a three-component polyurethane glue. As opposed to the PU foam its volume does not change. The three components consist of a brown liquid, a white liquid and a fine sand/white powder. The powder thickens the mixture to provide a consistency with which to work.

The glue is pre-measured and each component is supplied separately in a 3kg box ready for site mixing (no measuring required).

Cement-Glue

Cement based glue is supplied in dry powder form in 25kg bags and is mixed on site with water in accordance with the instructions on the bag.

Installation

Preparing PU-Glue

The Gebrik panels, slips and mixing equipment must be sound, level, clean, dry, free of paints, oil and other bond-inhibiting residues prior to application of the PU-based adhesive.

NB

If PU-Glue comes into contact with water it must not be used as Component B will release CO₂ and the glue will 'fizz' or bubble , increase in volume and ultimately adhesion will fail.

- 1) Use the adhesive at atmospheric temperatures between 5°C and 35°C.
- 2) To prepare the glue you will need a clean, dry 5-litre bucket, a drill with low speed and high torsion strength, a mixer with a diameter of approximately 50mm.
- 3) In a dry area pour the white thick liquid (Component A) into the dry bucket.
- 4) Add the brown liquid (Component B) and mix well together until you have a homogenous mass.
- 5) Add the powder (Component C) and mix it until you receive a workable paste. The longer you mix the glue the more fluid it will become so start at approximately 1200 tr/min and slowly increase to 2400 tr/min. The glue is now ready for use and must be used within 30 minutes.
- 6) Typical coverage is 25no slips per 3kg box,

Preparing Cement-Glue

The Gebrik panels, slips and mixing equipment must be sound, level, clean, dry, free of paints, oil and other bond-inhibiting residues prior to application of cement-based adhesive.

- 1) Use the adhesive at atmospheric temperatures between 5°C and 25°C.
- 2) Place approx 9.25l of water to 25kg of adhesive powder (or to a similar ratio if less adhesive is required) in a clean mixing container, add powder while mixing with a paddle attached to an electric drill until all lumps have disappeared. Leave to stand for a few minutes and re-mix.
- 3) Though cement based glue is water based, once the glue has been prepared care must be taken to ensure no further water is added as this will dilute the adhesive quality of the glue.
- 4) Typical coverage is 25no slips per kg with a work time of approx 3 hours. The slips will be set from approx 12 hours and sound within 3 days, at 23°C and 50% RH (higher temperatures reduce and lower temperatures increase these times)



Installation

Application of brick slips and pistols

1. Before applying the glue to the brick slip ensure that it is the correct size and cut to length or trim any edges as necessary.
2. Wearing fine gloves to protect your hands apply the glue to the rear of the brick slips with a small trowel or spatula. Ensure there is sufficient glue to cover the full surface at the appropriate depth.
3. Press the glued slip against the PU foam and move it around to ensure there is total surface contact.
4. Make sure that the brick slips are correctly aligned and a constant stretcher course is maintained and if necessary hold the brick slips in place whilst the glue sets by tapping nails into the foam and ensuring that you do not push them through the glue. These can be removed after 12 hours.
5. Never change the ratio of pre-batched PU glue nor add fresh water to the cement based glue.



10. Pointing

Pointing is carried out not less than 7-10 days following foaming using either cement or lime based mortar, and a water repellent. The mix should be no stronger than 3:1 (sand:cement) or weaker than 6:1 (sand:cement) and will vary from brick to brick, depending on water absorption. Advice should be sought from the mortar supplier or specialist applicator if in any doubt. Bucket handle or flush joints are typically used and recessed joints are achievable to 3-5mm.

We strongly recommend mortar is applied with mechanical (eg Gunpoint) or hand held (eg Easipoint) guns to minimise batch variation. Care should be taken to avoid pointing in inclement weather (to minimise efflorescence) and to ensure the whole joint is filled (to avoid free-lime staining). Immediately following pointing, ensure the facade is protected from direct sunlight (to avoid drying out too quickly), from rain (to avoid being washed off/out), from frost (to avoid cracking due to frost expansion).



Manual



Hand-held



Mechanical