#### **WELCOME TO VANDERSANDEN GROUP**

What makes bricks attractive and durable? Vandersanden Group is all about extra durability.

#### **BRICK BASICS**

Information about and inspiration from all the factors that influence the appearance of a façade:

Surface texture

Formats

Brickwork bonds

Decorative bonds

Joint colours

Types of joints

No joints

Combinations with other materials

Creative challenges

#### **BRICK SERVICE**

#### OFFLINE SUPPORT

Working together for the perfect result

Processing advice

Personal advice

Sample service

#### ONLINE SUPPORT

CE cards

Specification texts

3D mapping

Calculation tools

#### **BRICKS**

#### VANDERSANDEN BRICKS

Colour card

Alphabetical overview

Overview according to product number

Technical cards of all the bricks

#### **ZERO**®

Zero® in a nutshell

Colour card

Why choose Zero®?

Bricklaying with Zero®; the rules of the trade.

#### **HUWA**

Colours and types

Colour card

Applications in gardens

Mechanical paving with HUWA packages

Drain paver, the ideal foundation

#### **BRICK SOLUTIONS**

#### PROFILE BRICKS

#### **BRICK SLIPS**

#### E-BRICK

Information & inspiration

Range of E-Bricks & processing advice

Technical card

FAQ

#### E-BOARD

Information & inspiration

Range of E-Boards & processing advice

Technical card

FAQ

#### SIGNA

Technical characteristics

Millions of possibilities

Mounting

Advantages

#### **OUR SHOWROOMS & CONTACT PERSONS**

#### BRICK LAYING ACCORDING TO THE RULES OF THE TRADE



INSPIRING BRICKWORK BONDS

The correct processing advice and the accompanying tools that Vandersanden offers you: extra quarantees for successful realisations.

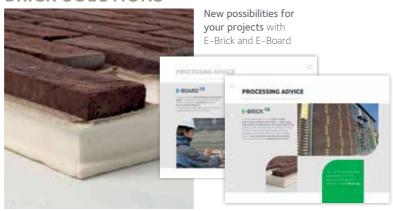
# A PALETTE OF STYLES AND COLOURS



Stretcher or irregular? Raking stretcher bond or Flemish bond? Give your façade an extra touch with a carefully chosen brickwork bond.

More than 100 styles and colours: you are guaranteed to find the ideal facing brick for your projects. We also have a wide range of paving bricks.

#### **BRICK SOLUTIONS**



RICKS & BRICK SOLUTIONS

Vandersanden Group offers bricks and brick solutions of the highest quality.



Hopefully, this folder will have a privileged place among your reference books. We have compiled this Inspiration & Information folder to put you on your way to beautiful and interesting brick projects.

We hope you enjoy reading our folder.

BRICKS & BRICK SOLUTIONS





# WELCOME TO VANDERSANDEN



### Dear construction professional,

For three generations, Vandersanden Group has been offering a wide assortment of bricks and brick solutions. One by one, products made with love and craftsmanship.

One by one, developed to make buildings more beautiful, smarter, sturdier, and more sustainable.

With this publication we want to contribute to your projects. We want to make it easier for you, your employees, and your customers to choose the right brick and the right brick processing. By informing and inspiring you. Continue reading and discover the world of bricks and its applications, which will give your project added value.

We wish you good luck and beautiful results.

The team of Vandersanden Group

Vandersanden Group inspires and advises. You will definitely find the brick solution to fit your project.



# Do you have a specific question or comment? Our knowhow is yours.

Do you need a quote or a sample? We will take care of it. Your contacts persons are listed on the back of this folder. Call or email them if you have any questions. They will be happy to help you.





## **WHY BRICKS?**

Bricks are a warm and noble natural product.

In addition, this **environment-friendly and durable building material** lasts for a long time.

A very long time; up to more than 100 years. And contrary to other materials, a brick wall is very user and maintenance friendly.







Of course, an architect already knows all this. We will quickly list the **advantages of bricks for you:** 

- · resistant against high pressure and frost;
- does not shrink and expand during fluctuation of temperature;
- · can absorb heat very well;
- is reusable and recyclable;
- is available in many colours and textures .

No wonder that for centuries architects and customers have a heart for bricks. Bricks do not only resist the ravages of time; this durable material is continuously being reinvented. We at Vandersanden Group are specialised in such innovations. We offer you modern, even advanced bricks and brick solutions.

Bricks are suitable for styles and tastes of all varieties. The photos in this folder illustrate this and will inspire you. We wish you many fascinating brick discoveries.



# 10 REASONS WHY BRICKS ARE DURABLE

## 1.

#### The use of natural base materials

Bricks are the result of a combination of **purely natural elements**: clay, sand, water, air, and fire. No toxic substances are added to bricks. In addition, bricks are inert material: it does not or hardly react to other substances and also **does not release toxic substances or allergens.** Therefore, there is absolutely no risk of soil pollution.



## 2.

#### **Economical base material policy**

Clay and loam are natural and seemingly inexhaustible base materials. Excavation is limited and excavated sites reconstructed for agriculture or recreation. We also use starting materials that are released during infrastructure work and building projects in order to keep down the exploitation rate of the pits.



## 3.

#### Clay extraction creates new possibilities

The excavation of clay is temporary by nature. The exploitation covers a **limited surface** that never grows in time, but merely moves. After extraction the site is reconstructed. This often leads to added value for the biodiversity, among other things, as a result of constructing nature reserves. In the Netherlands it is even so that the rivers deposit more clay than that is used for brick production. This way, clay extraction helps keep the **rivers navigable**.



## 4.

## A production process that respects the environment and with the highest level of energy efficiency

The production process of bricks is continuously being optimised. For decades, manufacturers have been taking numerous **measures to decrease** 

#### energy consumption:

- · High-performance tunnel ovens that work on natural gas
- Strict observance of the baking process by means of computer programs
- · Recycling heat from the oven in the drying rooms
- Own production of electricity by means of total energy plants (see also section about efforts of Vandersanden Group).

#### The result?

Since the 70s, the energy consumption for the production of bricks decreased by 50%. After all, in every step of the production process people continuously search for a level of energy consumption that is as low as possible. The reason that the production of bricks has such a low and specific energy consumption is due to the fact that only the preparation, drying, and backing of the clay needs to be calculated. There is absolutely no environmental impact as a result of water contamination or residual waste.



97 Robusta - Architect: M30 Architecten, Oisterwijk (NL)



## 5.

#### **Short transport distances**

Brick kilns are often located **near the quarry**. This way the clay does not need to be transported across long distances. Some brick kilns sometimes add clay from other quarries in order to expand their product assortment. But even then, transport remains rather limited.



#### Long lifespan without maintenance

Bricks are made to last for generations. The average lifespan of a building made from bricks is estimated at more than 100 years. The impact of the building on the environment is also much smaller because it does not need maintenance.

**7.** 

#### **Durable and precious**

Their lifespan and limited environmental impact make bricks unbeatable if you want to build a durable building. Bricks make it possible to create beautiful buildings with limited spending and a long lifespan.

## 8.

#### Confortable et solide

Les briques protègent parfaitement contre la pluie et le vent grâce à leur excellente inertie thermique, c'est-àdire: leur capacité d'accumulation de la chaleur. Le secret? Pendant l'hiver, les briques captent la chaleur des rayons du soleil par temps ensoleillé et redistribuent cette énergie lorsque c'est nécessaire. En été, les briques jouent un rôle régulateur et évitent que le bâtiment ne soit trop chaud. La brique est, de surcroît, un matériau incombustible et robuste.





## 9.

#### Possibilités de recyclage et de réutilisation

Les façades en briques peuvent être détruites. Après avoir enlevé les restes de mortier, les briques sont alors parfaitement **réutilisables**, pour des travaux de restauration par exemple ou des projets de construction et des habitations neuves. Les débris de briques provenant de chantiers de démolition peuvent aussi être recyclés et utilisés notamment aux fins suivantes:

- matériaux de comblement et de stabilisation pour les travaux d'infrastructure;
- · agrégats pour le mortier et le béton préfabriqués et déversés sur place;
- agrégats pour les briques en silice de calcium;
- · 'brique moulue' rouge pour les courts de tennis ;
- substrats pour les plantes.

# 10.

#### Facilité d'adaptation d'un bâtiment en briques

Les bâtiments en briques sont **très flexibles**. Ils peuvent être adaptés pendant le processus de construction et pendant toute la durée de vie du bâtiment. Il est rare qu'un bâtiment doive être démoli à cause de 'problèmes' liés aux briques. L'agencement d'un bâtiment doit être modifié à la suite d'évolutions sociales? Avec un bâtiment en briques, c'est tout à fait possible! Voici donc une autre manière de penser... durablement!





## VANDERSANDEN GROUP MAKES BRICKS EVEN MORE SUSTAINABLE

1.

## Extra focus on the environment during production

During the production of our facing bricks we obtain a **return of 100%**: every kilogram of base material becomes a kilo of bricks. In addition, the groundwater that is used in the process circulates in a closed circle. This means that absolutely no industrial water is discharged and consequently you can speak of **no discharge**.

2.

#### **Purified air emissions**

Vandersanden Group pays extra attention to air quality. For years we have been working with economic tunnel ovens that work on natural gas; the cleanest and most environment-friendly fuel. In addition to this, the combustion gas is also purified in a flue gas filter. All of this leads to controlled air emissions with results way below the most stringent standards.





3

#### Unique rail system

An aboveground rail system in Spouwen ensures optimal efficiency with regard to loading and unloading brick packages. With this system the facing brick is transported from the factory to the correct storing space. Less fork truck traffic makes for less noise pollution and exhaust gasses.

4.

## Clean Site System: recycling packaging plastic

In Belgium, Vandersanden Group supports the project **Clean Site System** in which contractors receive large recycling bags for plastic. These are placed at the sites and collected by the participating builder's merchants for recycling. The total packaging material of facing bricks is less than 1% of the weight of a pack of bricks.





## 6.

#### Installation of solar panels

The Vandersanden Group factories in Lanklaar and Spouwen have photovoltaic (PV) installations (better known as solar panels). This way we generate even more power ourselves and contribute to the environment. The capacity of the installed solar panels is 407 kWp in total: 253 kWp in Spouwen, 154 kWp in Lanklaar. Combined, the two installations provide 360 MWh of sustainable energy.

## 5

#### **Total Energy**

Vandersanden Group has invested in total energy plants in its factories in Spouwen and Lanklaar. A total energy plant is a 16 cylinder gas motor that is connected to an alternator. The gas that is used returns energy in the form of electricity and warm air. This warm air is not waste energy: it is used to dry the bricks and to heat the workplace. If the electricity in the main cabin falls out, then the total energy plant keeps the ovens and the drying rooms working. The total energy plant works during production hours and provides 50% of the total power needs of the factory. This way we save not only energy, but also cause less carbon dioxide emission

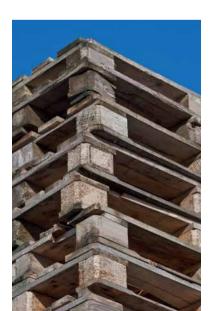


## 7.

#### Computer operated ovens

Vandersanden Group optimises its computer controlled ovens and drying plants with the newest controlling methods. As a result of these investments we achieve **sustainable savings**:

- less consumption of natural gas in the ovens due to improvement of the heat transfer between combustion gasses and brick;
- more efficient use of cooling air from the ovens in the drying process so that as little additional natural gas as possible needs to be burned.



8

#### VAL-I-PAC organisation: Recycling pallet boards

After the production we pile the bricks on pallets made from 100% untreated wood. In Belgium, Vandersanden Group is a member of VAL-I-PAC and contributes to reusing pallets via a recycling circle.



## 9.

#### **Green buffers**

We lay as many **green buffer zones** as possible around our factory buildings and storage spaces. In this way the green character of the rural environment is maintained and we integrate the factories with their environment as much as possible.



## 10.

#### Decreasing carbon dioxide emissions

Vandersanden Group is a member of the Limburg Climate Parliament, a group of organisations that play an essential role in decreasing carbon dioxide emissions and that are willing to actively contribute to making Limburg carbon neutral by 2020. In Flanders, Vandersanden Group participates in the Do Tank ETS companies – EU Emissions Trading System – of the Cleantech platform. These are companies that fall under the European system of trade in emission rights. The Do Tank ETS companies search for solutions that offer an economic and ecologic added value.

















# FACTORS THAT DETERMINE THE APPEARANCE OF THE FAÇADE

- 1. the colour of the facing brick;
- 2. the visible surface texture of the facing brick;
- 3. the size or sizes of the facing bricks;
- 4. the brickwork bond:
- 5. the colour of the joint (if there is one);
- 6. the type of joint (if there is one);
- 7. **combinations** with other materials (if there are any).

This tab will discuss in further detail the various possibilities.



533 Morvan Zwart - Architect: Unknown



45 Lithium - Architect: Stramien cvba, Antwerpen (BE)

# WHERE DOES THE COLOUR OF A BRICK COME FROM?

The colour of the chosen facing brick is a decisive factor in determining the look of the façade. In case of glued masonry, that colour becomes the pure colour of the facing brick. But do the colours of the bricks come from? There are several factors that determine the colour:

the colour of the fired clay mixture (the colour of the brick's heart);



the colour of the sand or encobe (thin layer of clay) fired into the surface;



**3.** colour nuances as a result of the baking process (oxidising or reducing);



Our brickmakers work with the elements that nature provides us with. Their knowhow and creativity result in an extensive colour palette. You can choose from more than 140 colours and that is just our standard assortment!



# **SURFACE TEXTURE**

At Vandersanden you can choose from facing bricks with various textures. The textures give your project its own appearance and character. The texture is the result of the chosen manufacturing technique.





## 1. MANUALLY

The most well-known and applied facing brick type. Nowadays, this process is done by a machine that imitates the ancient manual form of brick forms.

#### Working method

A ball of clay is rolled in a sand carpet and placed in a stock brick. This creates folds, which results in a brick surface with grains after the baking process.

#### **Effect**

This texture gives the colour of the facing brick more depth and style. The grains create fine lines of shadow due to the effects of light.

## 2. STOCK BRICK

In principle, this production process is comparable to the manual production process.

#### Working method

The smooth ball of clay is pressed in a sanded mould. This way no folds are created.

#### **Effect**

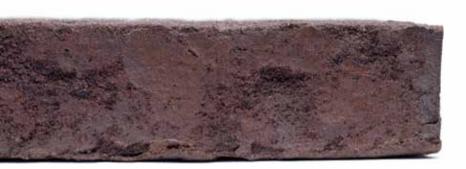
Smooth brick surface with equal sandfacing. The brick is smoothly shaped.



#### Eye catching Coralline surface

Some facing bricks from the hand-made assortment are eye-catching because of a slightly different texture of the surface. Not just sand, but a mixture of sand and sawdust is used during the production of these bricks. The sawdust totally burns away in the tunnel oven, but creates a very specific texture that is probably best compared to the surface of coral reef. Examples? Tramonto, Milano, and Viterbo.





# 3. WATERSTRUCK

A unique moulding technique of which the name hints to the use of sprayed water.

#### Working method

The ball of clay is not rolled in sand but placed in a non-sanded mould. In advance, this mould is sprayed wet.

This way the unfired brick can be taken out of the mould.

#### **Effect**

A bit of accumulated air between the clay ball and the wall of the stock brick create a slight texture on the surface. The brick is relatively smooth and shows less grains.

## 4. NOSTALGIE

A patented mould process of Vandersanden.

#### Working method

In principle, it is a finishing to the manual mould technique. After the drying process, the unfired facing bricks get extra pigments on the visible surface and get a distressed look by tumbling them. A huge advantage is that this technique takes place before firing the bricks, which is why the same quality guarantees (CE, Benor, etc.) of the manual technique apply to the nostalgia technique.

#### **Effect**

A bit of accumulated air between the clay ball and the wall of the stock brick create a slight texture on the surface. The brick is relatively smooth and shows less grains.



#### THE ENGOBED WATERSTRUCK

Using an innovative self-developed technology, the Vandersanden Group has created a special series of engobed Waterstruck facing bricks. Engobes are applied to the unbaked clay, which produces a subtle surface effect in terms of colour and sheen. (You can read more about engobing on the following page.)

A facade with engobed Waterstruck alternates mat facing bricks with ones that reflect sunlight. Be sure to ask for the brochure with inspiring visual material!



# **SPECIAL TECHNIQUES**

In addition to texturing and sand-facing bricks, there are also other ways of making a brick unique.

#### **APPLYING COAL SLAGS**

Coals slags, which are typical for old and traditional brick kilns, are imitated using special techniques.

#### Working method

Before the firing process, a mixture of natural starting materials is spread between the unfired bricks. This way the percentage of coal slags can be controlled, which creates a proper distribution over the entire package of bricks. Some examples? Vecto, Kripto, Salvia applied with coal slags.





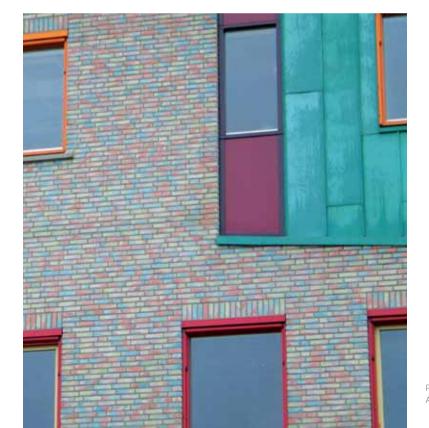


# APPLYING ENCOBE (THIN LAYER OF CLAY)

Encobes are pigments that mostly consist of clay minerals and oxides.

#### Working method

Mixing in water creates a liquid mass. A thin layer of this substance is sprayed on the unfired bricks with special sprinkler nozzles. In the oven these encobes sinter to the surface. Encobe stains can partially or entirely cover the brick surface. They exist in all the colours of the rainbow.





Project: Applying Cameo encobe, Isala clinic, Zwolle (NL) Architect: Alberts & Van Huut B.V., Amsterdam (NL)



## **SIZES**

The size is very determining for the appearance of a façade. The larger the size, the larger the share of the bricks in proportion to the joint mortar. And the other way around.

Most colours in the assortment of Vandersanden Group facing bricks are available in the following sizes:

#### M50

± 190 x 90 x 50 mm (± 83 pieces per m²)

#### 'Waal' size (WS)

 $\pm 210 \times 100 \times 50 \text{ mm}$  ( $\pm 72 \text{ pieces per m}^2$ )

#### M65

± 190 x 90 x 65 mm (± 66 pieces per m²)

#### Thick size (TS)

 $\pm$  210 x 100 x 65 mm ( $\pm$  58 pieces per m<sup>2</sup>)

#### NS

± 240 x 115 x 70 mm (± 48 pieces per m²)

#### ZERO

± 204 x 100 x 50 mm (± 90 pieces per m², masonry without joints)















72 Treviso - Architect: Loof & van Stigt Architects, Amsterdam (NL)

#### TIP

Vandersanden Group also offers profile bricks. These are facing bricks with a special design. For example, curved bricks, bricks with an angle of 135°, bricks with rounded corners, etc. The linear measures of such bricks vary and depend on the specific application.

More about this in the 'Profile Bricks' tab.



#### TIP

The 'Waal' size makes buildings seem wider. This size emphasises the horizontal aspect of the brick and the building. This is interesting for projects on small building grounds or projects in which this kind of effect enhances the architecture of a building.



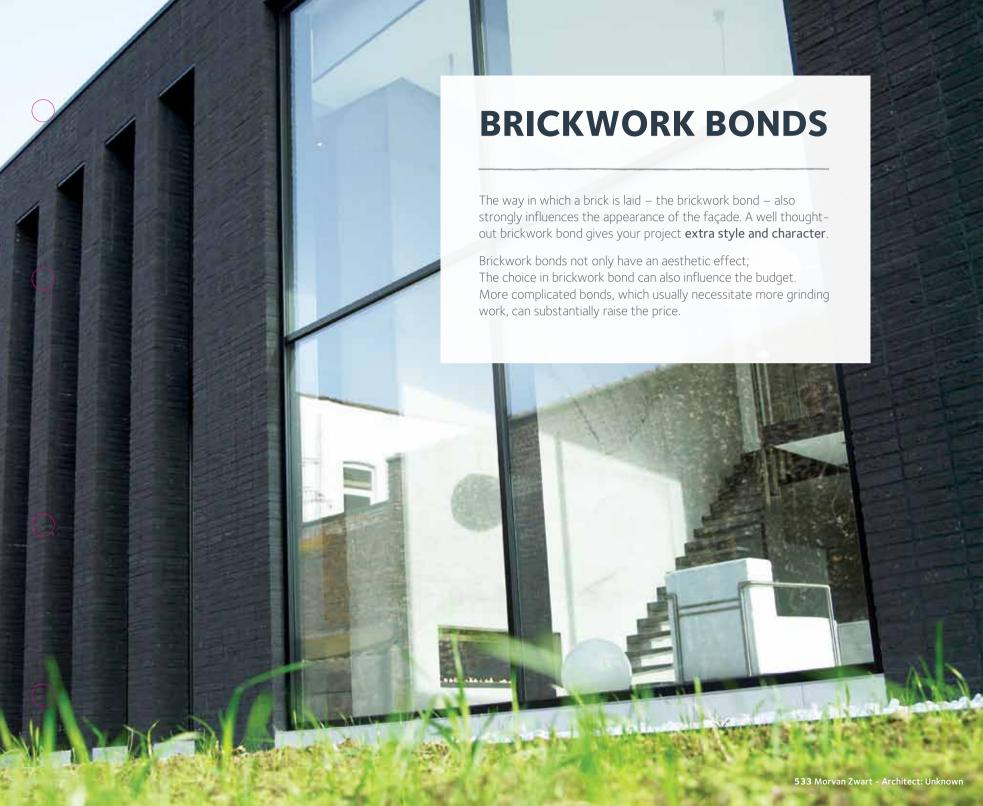
#### TIP

Every facing brick is also available in the shape of brick slips in the same colour and size. A brick slip is a  $\pm 2$  cm thick piece that is cut from a facing brick in the length.

The height and the width of a brick slip is therefore the same as those of an entire facing brick. Brick slips are not laid with mortar but glued against an existing surface. Once they are finished with joint mortar they are indistinguishable from classic masonry.

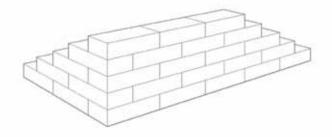
This is a very interesting product for interior application of bricks. Gluing brick slips on wall surfaces is a more logical working method when it comes to interior design, because the thickness of the coating is only 2 cm. Thus the available interior space is not unnecessarily reduced.

More about this in the 'Brick Slips' tab.

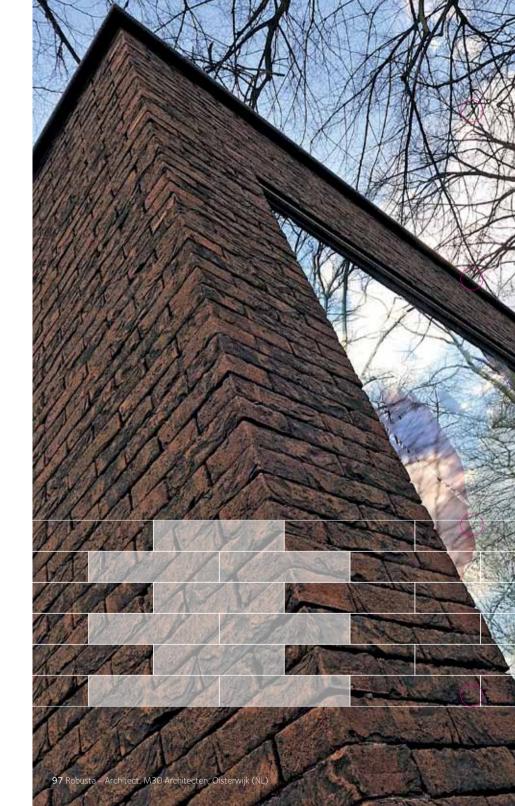


### Stretcher bond

This is the most common and used brickwork method. The vertical joints are staggered each time by half a brick. There is hardly any loss of material because the bricks do not have to be grinded to size.

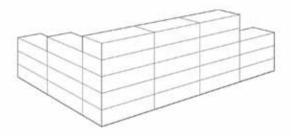






## Stack bond (or stacked bond)

This bond visually emphasises the vertical aspect of the masonry. The facing bricks are laid one on top of the other so that not only the horizontal edge joints, but also the vertical head joints are continuous.

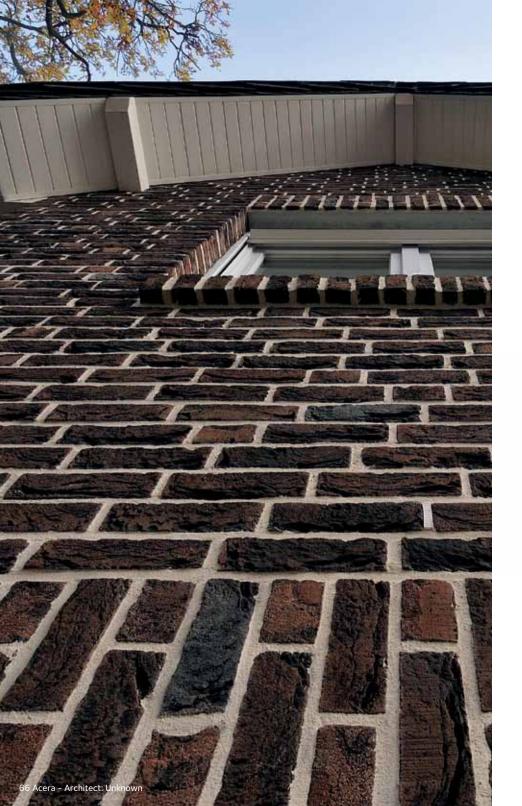


This can be done with stretchers as well as with headers. However, the latter will up the price due to all the grinding and cutting work.



43 Argentis - Architect: Claus en Kaan Architecten , Amsterdam (NL)

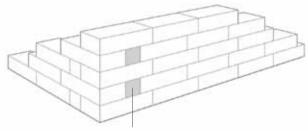




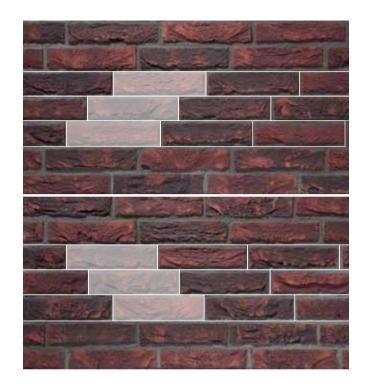
### Raking stretcher bond

A variation on the stretcher bond. The vertical joints are staggered each time by a quarter or three-quarters of the brick's length. Aesthetically this gives a descending movement to the bond.

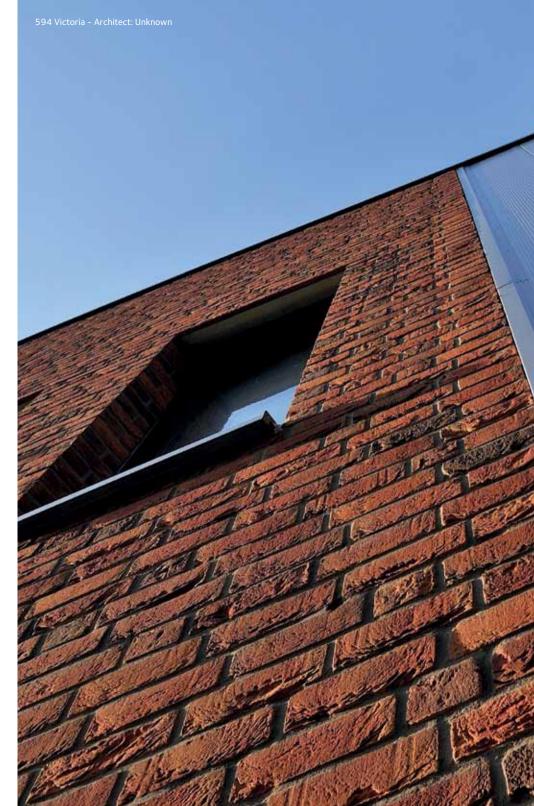
This can even be carried out to the left and to the right. At a certain height you change the direction in order to break the long bonds of slanting bricks. This way you create a zigzag effect.



By laying a quarter-closer, the direction of the 'toothing' changes, descending to the left or to the right. In this example, a quarter-closer has been used every two courses, resulting in 'racking' (a standing tooth).

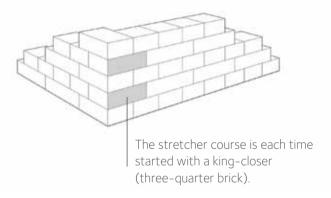






## English bond

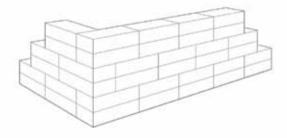
This bond maintains a pattern of headers and stretchers. A course of stretchers alternates with a course of headers.





### Block bond

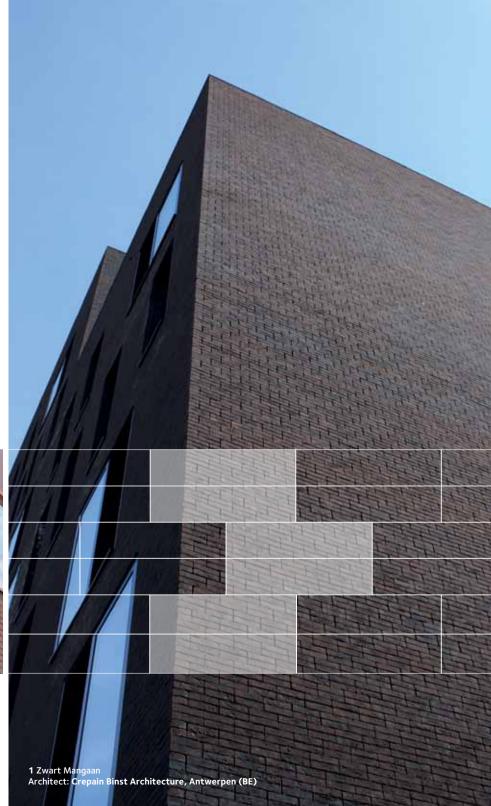
A combination of the stretcher and stack bond. Two courses are laid in stack bond and the next two courses are laid while staggering by half a brick.







You can be very creative with brickwork bonds. Here the block bond has 4 courses, but it alternates with a horizontal-vertical stack bond.



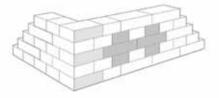
### English cross bond

As the name hints at, crosses are visible in this pattern. They are formed by alternating a course of headers with a course of stretchers, just like in English bond.

#### There are 2 variations:

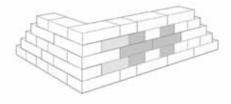
#### English cross bond with king-closer:

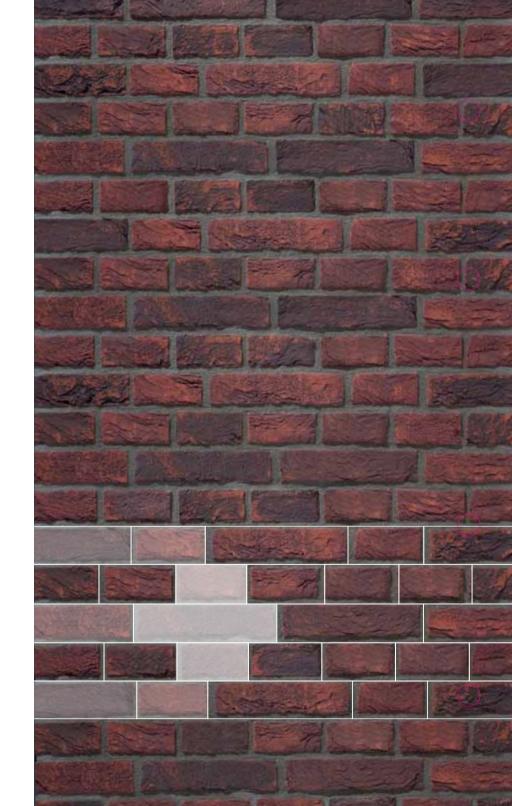
A king-closer is laid at the end of the stretcher course. Every 4 courses a header is laid next to the king-closer. This way the bricks are staggered by half a brick.



#### English cross bond with queen closer:

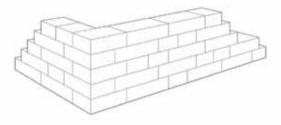
The king-closer is NOT placed in the stretcher course but in the header course. Furthermore, it is not laid all the way at the end, but next to the last header of the course. Every 4 courses a header is laid in the stretcher course so that the bricks are staggered by half a brick.

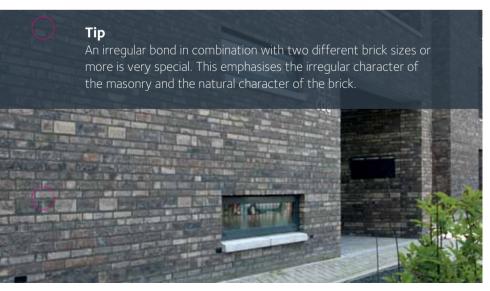




### Irregular bond

As the name hints at, there is no pattern in this bond. Various lengths of bricks are used, but never smaller than a quarter brick. There is only one rule: The vertical head joints may not continue into the next brickwork course, but must stagger each time. This brickwork bond is recommended/proper bond when laying or gluing facing bricks that are characterised by a low dimensional stability. When using recycled bricks you sometimes have no other choice.



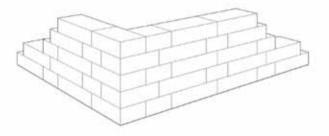


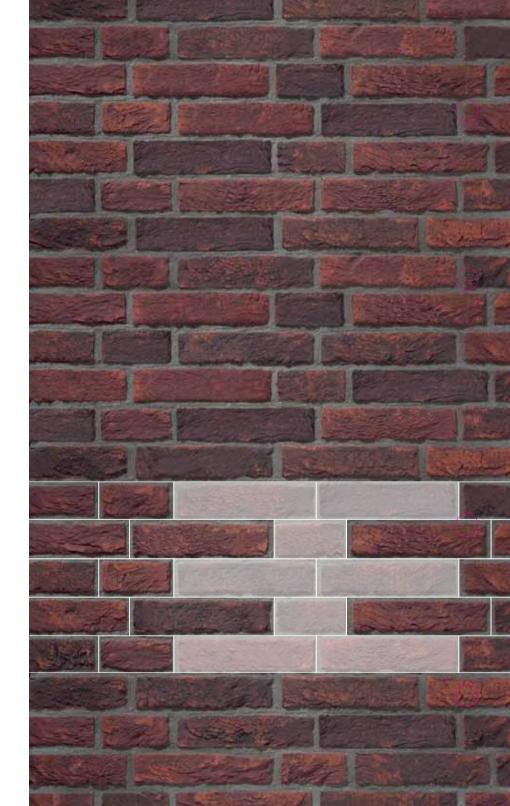


### Monk bond

An elegant and often used bond with a simpler pattern. All the courses consist consecutively of a header and two stretchers. As a result, the headers are aligned every second course, resulting in the formation of a 'procession'.

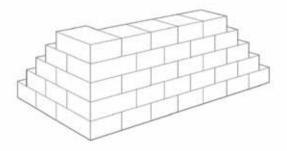
Compared to the English bond and the English cross bond, the number of headers is limited and therefore the price is lower.





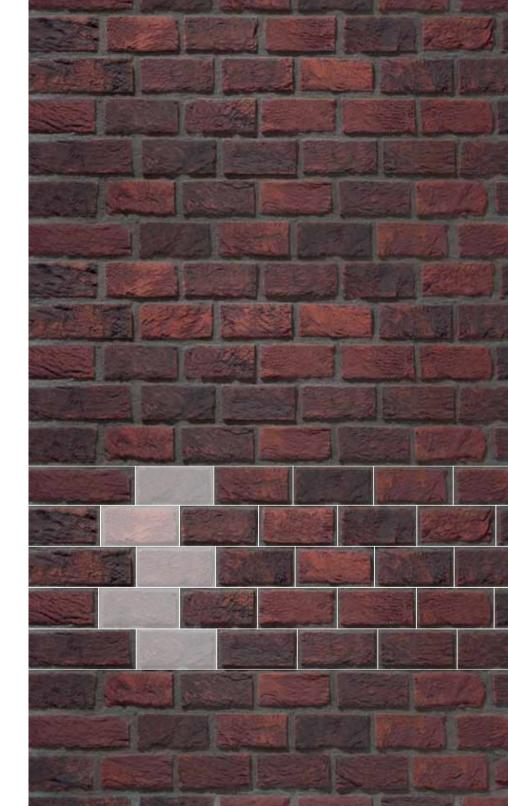
### Header bond

All the courses consist only of headers that are staggered by half a brick. The header bond is sometimes combined with the regular stretcher bond in order to create a curve in the wall in an easier way, for example.



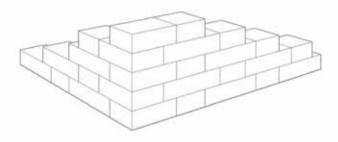
#### Tip

For such applications, special moulded bricks can be ordered in order to maintain the stretcher bond. However, the price of these bricks is higher. Change the direction with each course.



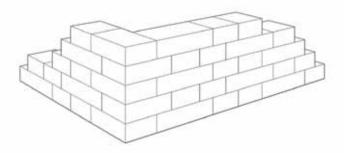
### Flemish bond

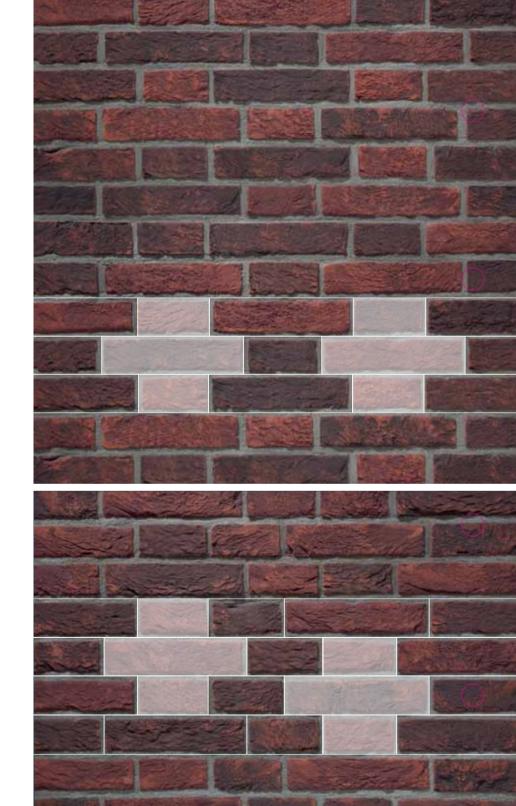
This bond resembles the monk bond. It differs in that all courses consist consecutively of a header and a stretcher. An often used bond that includes a little more cutting work.



### French bond

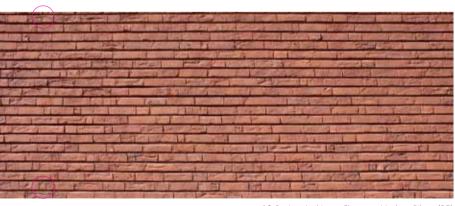
Every course alternately consists of a stretcher and two headers.





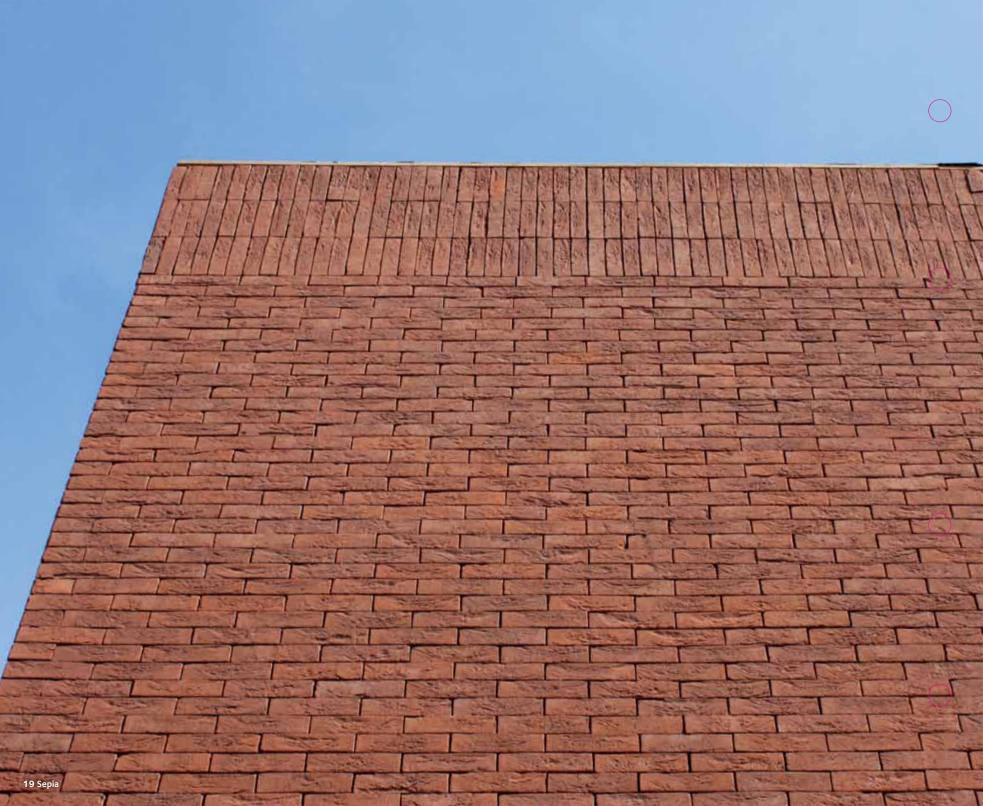
### No vertical head joints

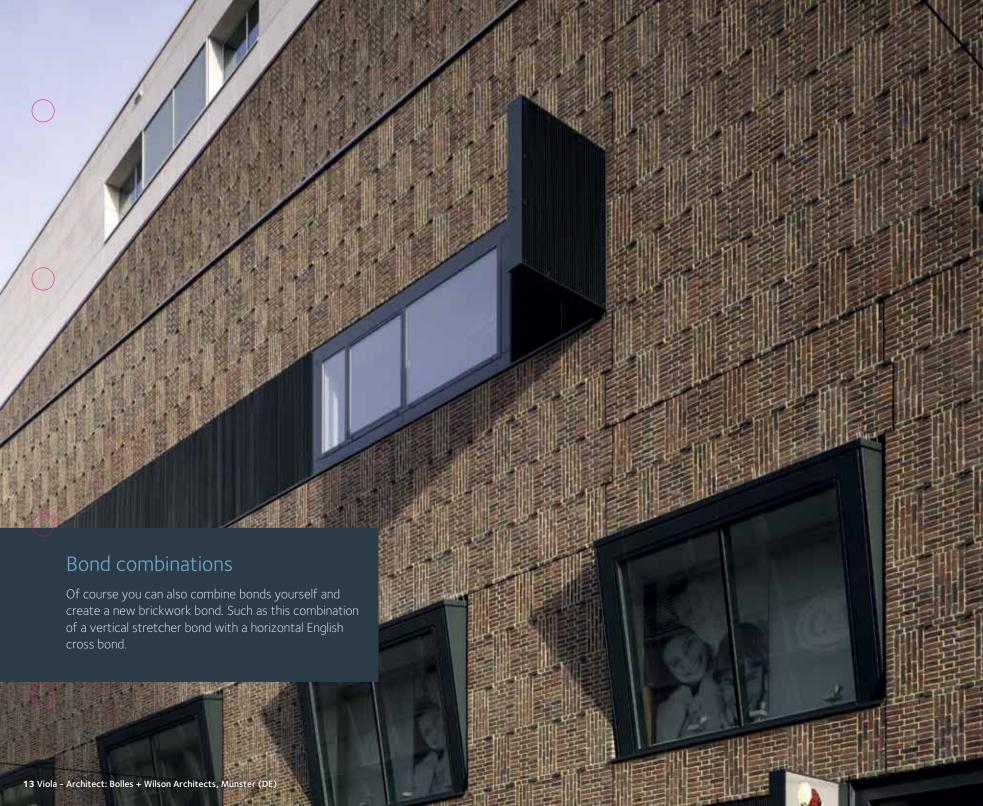
By laying the facing bricks against each other the head joints disappear and only the edge joint remains. This emphasises the horizontal play with lines of the masonry even more. It is an elegant way of visually lengthening a building.

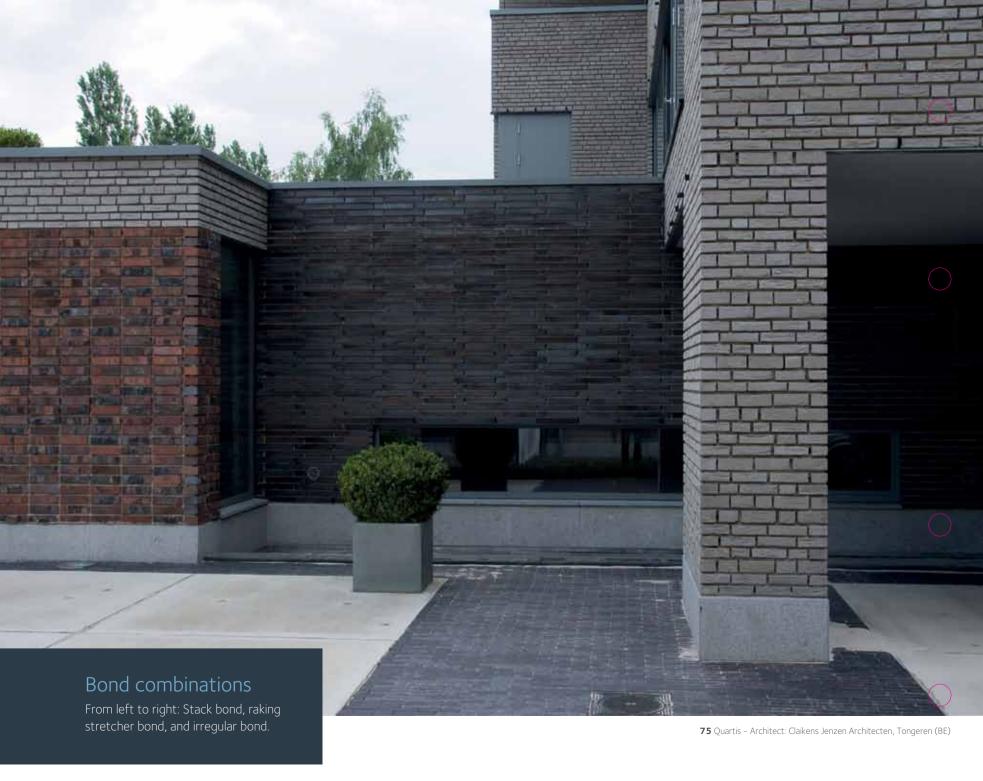


19 Sepia - Architect: Cleuren - Merken, Bilzen (BE)









### **DECORATIVE BONDS**

There are also brickwork bonds that function as local decoration. They are not applied to the entire project, but rather create a special effect in a specific part of the façade of the building. They offer quite some creative possibilities.

Some well-known examples:

# Herringbone bond at a 45 degrees angle

The facing bricks are laid diagonally and turned each time. This is not easy to do in façade masonry. This pattern is often used when paving with paving bricks.

### Herringbone bond

The layout of this bond looks like a herringbone. However, the bricks are not laid diagonally but horizontally and vertically.

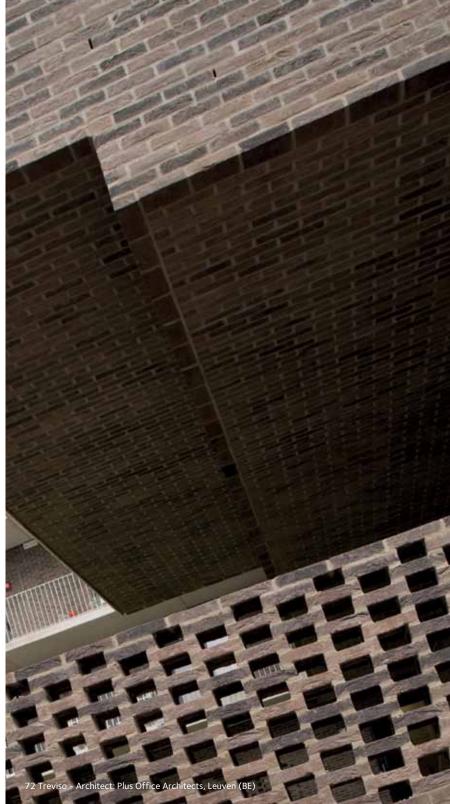
#### Brasilian bond

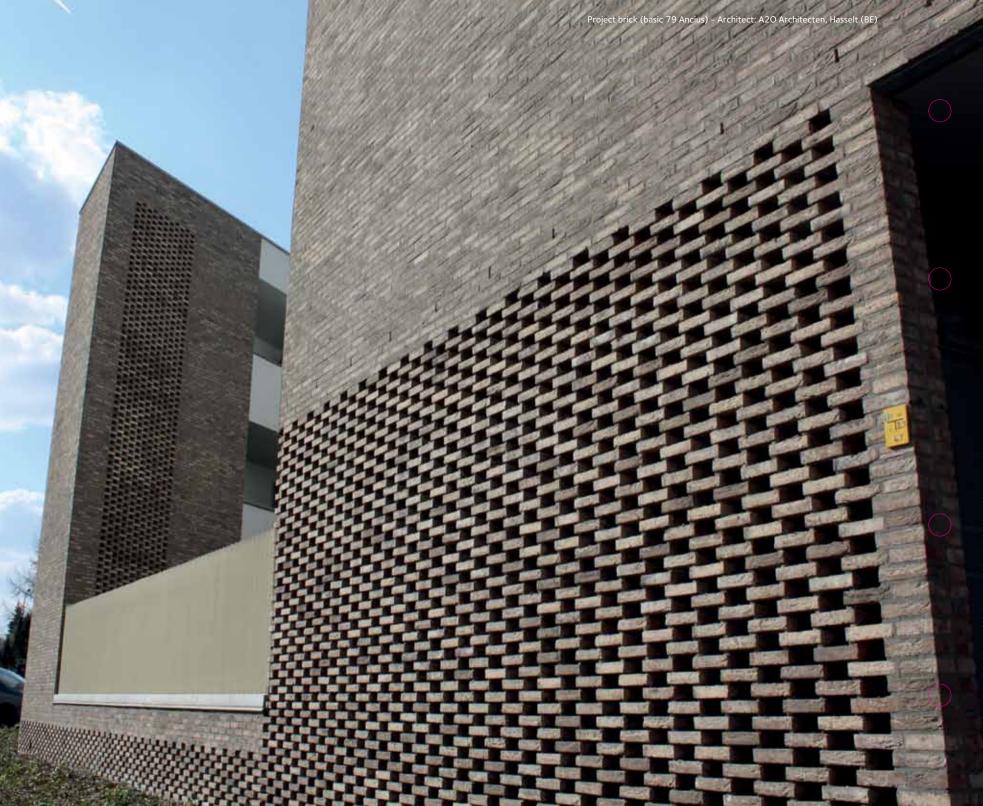
The facing bricks are laid in such a way that empty spaces are created. Result: a viewing hole effect. A surprising and elegant solution to partially show an underlying construction or to let more light in.











### WHAT IS A JOINT?

Masonry mortar is used in classic masonry. Open joints of about 10 to 15 mm wide are formed between the bricks. At the end of the working day about 15 to 20 mm of this masonry mortar is scraped out, which creates the necessary space for filling up the façade with a joint mortar.

#### A joint mortar has 2 important purposes:

- A practical purpose: the open joints are filled correctly and efficiently.
- An aesthetical purpose: 10 to 20% of the visible wall surface consists of the joints and therefore the joints greatly influence the appearance of the finished façade.

A joint mortar mainly consists of cement, sand, and water. The composition of the joint mortar varies depending on the colour of the joint mortar. Sometimes lime and mineral colouring agents are added.





86 Boston (red joint)
04 Platina (grey joint)



#### Joint techniques

The actual jointing can vary depending on the region and the building culture. There is no golden rule.

#### - Difference in timing

In Belgium, usually the rough structure is finished first while jointing is done in a later phase. In the Netherlands, jointing is done from the bottom upwards so that laying bricks and jointing are practically done simultaneously. Every system has its advantages and disadvantages with regard to planning, moisture effect, consistency of the joint colour, speed, scaffolds, etc.

#### - Difference in material

You can use a jointer for jointing. A long jointer is used for the horizontal joints and a shorter jointer for the header joints. Jointing can also be done using the spraying technique.

# Some tips for a beautiful and high-quality result.

- Always use clean water for making the joint mortar.
- In case of warm and dry weather conditions make sure that the fresh jointing does not dry up to fast. Bad bonding between the facing brick and the joint mortar can cause the joint mortar to fall out or pulverise in time. Avoid this by misting the façade with clean water during the first few nights after jointing. This way the joint mortar can stiffen naturally.
- According to the Belgian standard we advise you to create a joint of which the depth isn't smaller than the height, with a minimum of 10mm.



### **JOINT COLOURS**

When you choose to carry out a classic masonry instead of gluing the bricks, then the joint very much determines the end result.

Depending on the brick size that is used, 10 to 20% of the façade can consist of joints. Determining the colour of the joint is a choice that may take up quite some time. After all, the joint makes or breaks the façade.

#### Tip

Always try various samples on a façade before using it for the entire project. The surrounding, architecture, and personal taste can very much influence your choice.



#### Beware!

If the joint mortar is made at the construction site, make sure that it is ALWAYS done in the exact same manner. A difference in the colour of the joint can totally disrupt the appearance of the façade. It may even give the impression that different coloured facing bricks

### An overview of the most used joint colours and their effect on the façade.



Grey is the most common joint colour. It is the most neutral colour. From close up there is sufficient contrast with the colour of the brick. From further away the wall and joint seem to be one whole.



Black joints are being increasingly more used. They give a warmer effect with certain brick colours.



A white joint emphasises the play with lines of the joint and simultaneously refreshes and intensifies the colour of the brick.



Colouring on colouring joints create even surfaces. The contrast between the brick and the joint is reduced to a minimum



### **TYPES OF JOINTS**

The form of the joint also influences the appearance of a façade. Of course the height of the joint plays an important role, but the depth is also important. The deeper the joint, the more it will end up in the background. This creates a shadow play between the joint and the facing brick,

which especially emphasises the colour of the brick.

There are various standard types of joints. The price depends of course on the labour intensiveness.















#### **FLUSH JOINT**

#### Working method

The mortar is generously applied and levelled in a smooth way so that the mortar is flush to the brickwork...

#### Effect

This form of pointing is often used with colouring on colouring joint mortars. The even surface that is desired is emphasised this way.



#### **FLUSH BRUSHED JOINT**

#### Working method

The mortar is generously applied but not levelled smoothly. Brushing the excess mortar creates a more rough joint with more texture.

#### Effect

Here also this type of pointing creates an even surface when using colouring on colouring mortar. In addition, the brushed effect creates façade with more character.



#### WEATHER STRUCK JOINT

#### Working method

The mortar is applied partially recessed in an angle of 45°.

#### **Fffect**

This creates a shadow effect. The horizontal lines of the façade are emphasised.



#### **RECESSED JOINT**

#### Working method

This is an extra raked joint. The mortar is applied 2 to 5 mm deeper than the visible surface of the façade.

#### Effect

The emphasis is laid on the horizontal aspect of the façade, especially in combination with full vertical head joints or even no vertical head joints at all.



#### **RAKED JOINT**

This is also a very common type of pointing.

#### Working method

The mortar is pressed a bit inwards so that it is approximately 2 mm recessed compared to the facing brick.

#### Effect

This creates more shadow between the joint and the brick and gives a very well-cared-for appearance. Can be done smooth or brushed. This type of joint especially creates the desired effect when working with archaic Nostalgia bricks.



#### **CONVEX JOINT**

This is a type of joint that is less common because it requires more time and expertise.

#### Working method

The mortar is generously applied but not levelled smoothly. Brushing the excess mortar creates a more rough joint with more texture.

#### Effect

Here also this type of pointing creates an even surface when using colouring on colouring mortar. In addition, the brushed effect creates façade with more character.



### **TYPES OF JOINTS**

#### What is a doorstrijk joint?

This type of pointing is not much related to the aesthetic appearance of the façade, but the manner of bricklaying. Doorstrijk mortar is a mortar that is pushed up to the edge of the brick and then pressed with a jointer. In other words, a 2-in-1 mortar.

The point of departure: mortar is the weak link of the façade and it is therefore best kept out. The advantage of this is the fact that jointing is no longer necessary after that. You therefore gain working time and efficiency. On the other hand, doorstrijk mortar is more expensive. Here you also have a wide choice of colours.



#### 81 Ligure

#### **Cementation effect**

By generously applying the mortar and after that brushing it roughly over the entire façade, you create a cementation effect.







### **NO JOINTS**

When you choose the purely brick effect the joint is a disrupting factor. Increasingly more contractors choose to create a façade without joints.

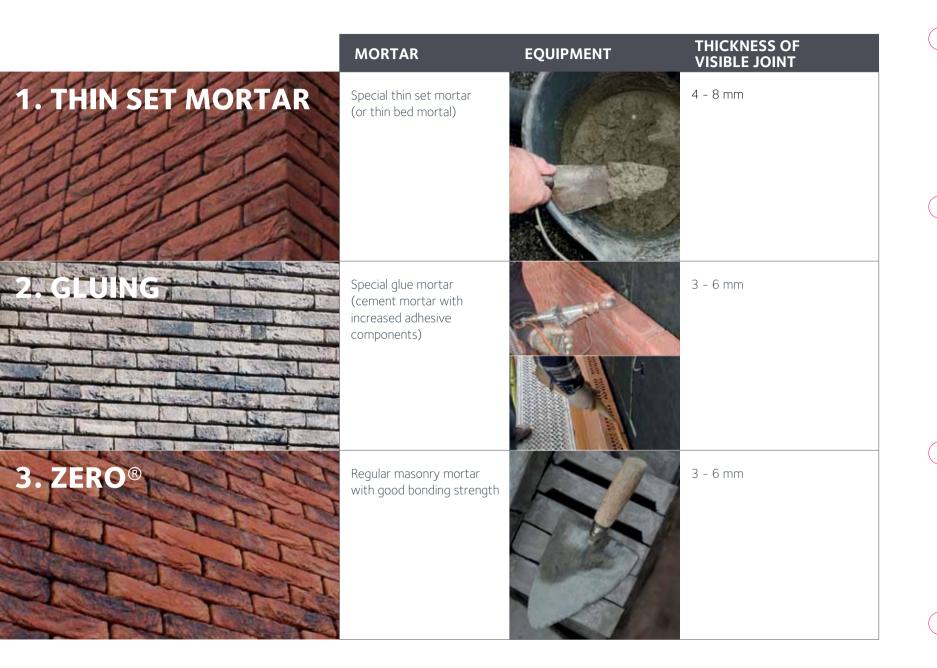
There are **3 known methods** for creating a masonry without joints:

- 1. Bricklaying with thin set mortar
- 2. Gluing together
- 3. Traditional masonry with ZERO®

We are happy to explain these 3 methods in detail to you.

#### Beware!

Each method generates additional costs compared to classic masonry. More facing bricks are needed per square meter of masonry. And in all cases more care and expertise is expected from the contractor. However, you do get rid of the costs of jointing.



# 1. BRICKLAYING WITH THIN SET MORTAR

Thin set mortar, a.k.a. thin bed mortar, is a **cement mortar** to which **glue has been added**. This increases the adhesive power of the mortar, which is why the thickness of the joint can be reduced to **4 - 8 mm**. The mortar is applied in a raked manner and is not jointed.

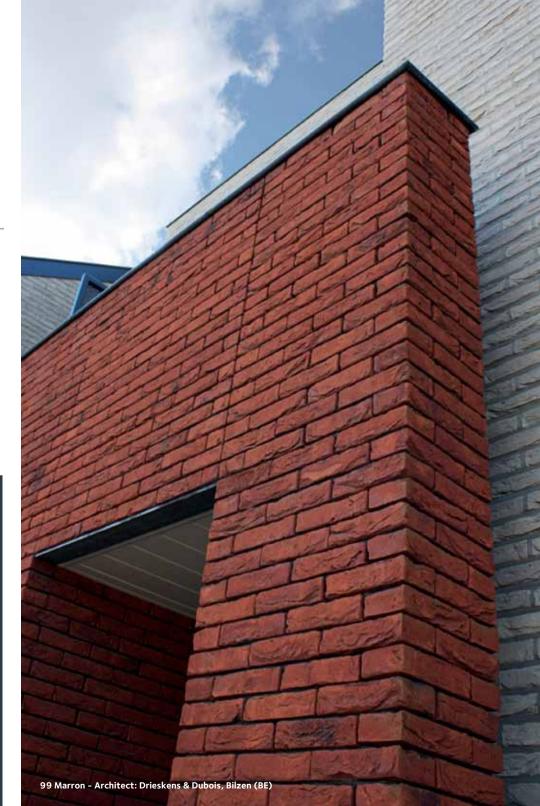
#### Advantage

This technique is interesting to use with facing bricks with an irregular design. After all, the mason has enough play to take care of the irregular shapes.

The advantage of thin set mortar is that it is not much more expensive than **regular cement mortar** and that it can be handled with a **trowel**.

#### Disadvantage

The disadvantage is mostly aesthetic. Though the joint thickness is reduced, it is nevertheless present. Especially when the joint thickness leans towards 8 mm, is seems sometimes that there is a need for jointing.







### 2. GLUING

Here a **glue mortar is used**. The term is somewhat misleading, because this does concern a cement mortar. More lime is added to this mortar, which increases the strength of the mortar considerably. The joint thickness is therefore only **3 to 6 mm**, depending on the dimensional stability of the facing brick.

Applying the glue mortar with the classic trowel is not self-evident. It sticks too much for this.

The contractor can choose between 2 working methods:



#### 1. With a gluing machine:

1. The glue is applied to the bricks in the form of a sausage by means of a pump and a pistol A second person lays the next course of bricks, etc. In good conditions this is a very proper and efficient way of working. In case of long breaks (rain, other assignments, etc.) it is necessary to refine the left over mortar in the mixer and to fill the mixer with

water. In case of changeable weather this is not always fun and much time is lost. In order to work comfortably you also need more space: the gluing machine takes up a lot of space. This method is often used for bigger projects or when gluing interior blocks.



#### 2. With a spraying sack

2. Like when applying whipped cream to a cake, with this method the glue mortar is poured into a spraying sack. The glue is then applied to the course of bricks in the form of a sausage. The dosing is adjusted to the desired joint thickness by adjusting the nozzle. The bricks are pressed in the glue. This method requires a bit more arm

strength, but saves on the renting costs of a gluing machine. This can be a determining factor in small or medium-sized projects.



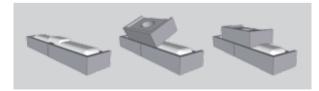
### 3. TRADITIONAL MASONRY WITH ZERO®

ZERO®, an invention of Vandersanden Group, combines modern architecture without joints with the traditional masonry.

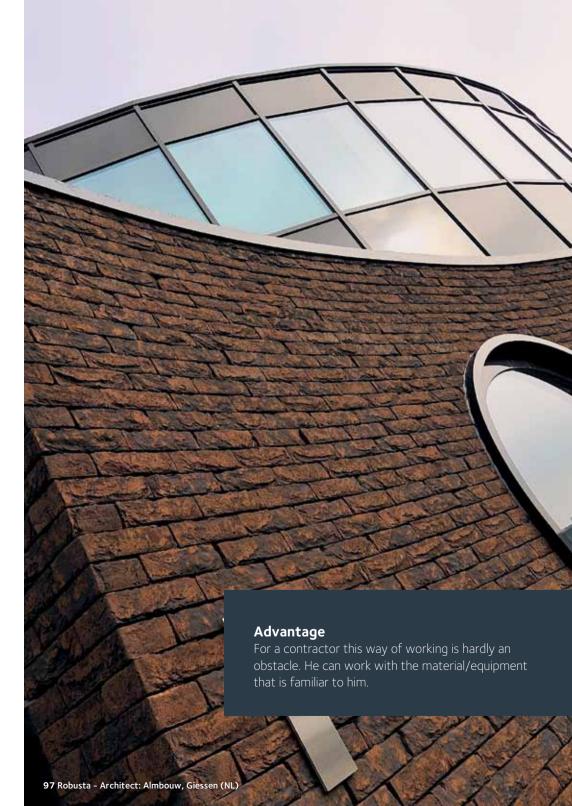
Customers and architects often abandon their initial idea of masonry construction without joints because of the higher price or the difficulty to find a contractor who glues for a reasonable price.

ZERO® is an ingenious solution due to its simplicity In principle it is nothing more than a specific size facing brick with which you work in the classic manner with mortar and a trowel. And yet, the result is a façade with thin joints of 3 to 6 mm.

The difference between ZERO® and classic masonry is in the laying of the brick. The brick is **no longer pressed vertically**, but tilted.



ZERO® has a special opening on the upper side of the brick. As a result the mortar bed is lower. It will sink even deeper when the next course of bricks is laid. On the facing side this creates a thinner joint. In addition, we also paid attention to a good proportion between the length and width of the brick so that it is perfect for working with a stretcher bond. This way the work proceeds quickly.







13 Viola - Architect: Unknown

Bricks are a natural material. A characteristic of natural materials is that they can be perfectly combined with other materials.

Each material has its own specific characteristics. Rough or smooth. Warm or cool. Combinations of shapes, textures, colours offer you quite some creative possibilities to give your project a unique look and feeling.

Everything is possible. We are happy to give you a few examples. Bricks combined with wood, plastering, concrete, glass, natural stone, zinc, metal, etc. And of course another commonly used combination: bricks combined with another type of brick.



04 Platina & 01 Zwart Mangaan - Architect: Drieskens & Dubois, Bilzen (BE)

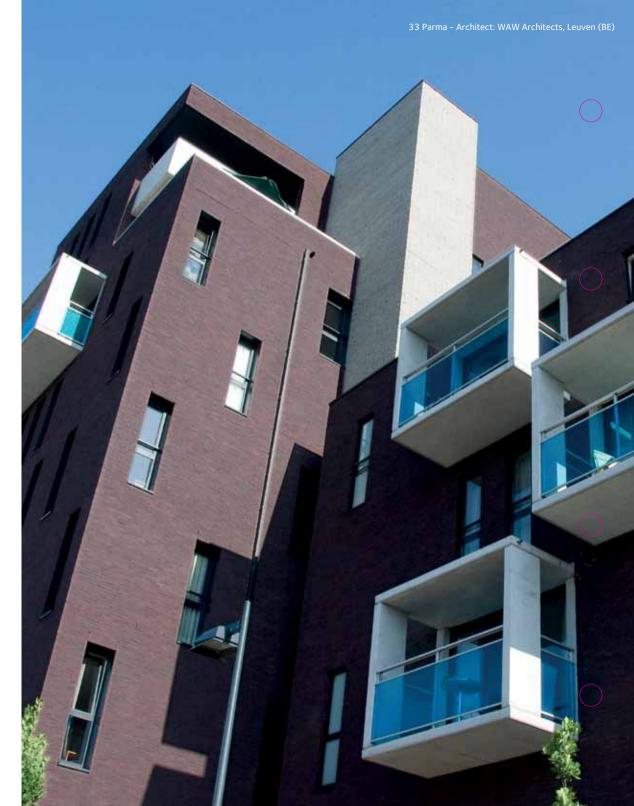


01 Zwart Mangaan - Architect: Unknown

### 1. Bricks & concrete



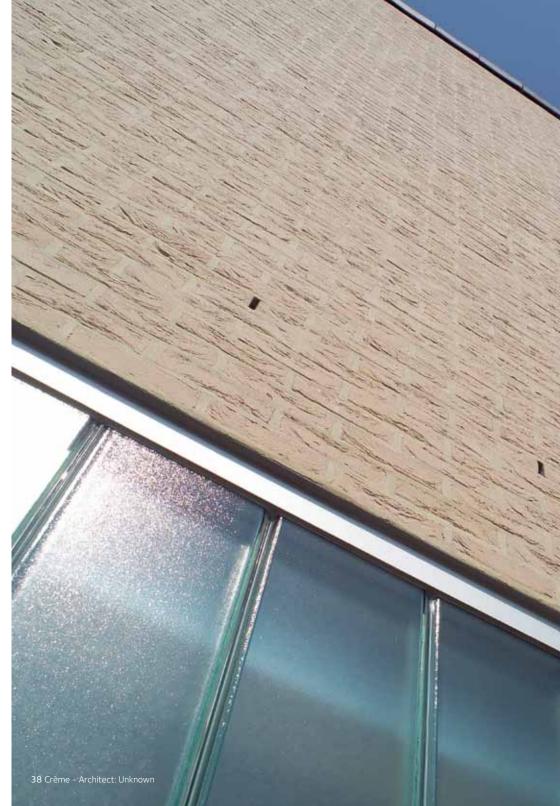
72 Treviso - Architect: Plus Office Architects, Leuven (BE)



### 2. Bricks & glass



97 Robusta - Architect: M30 Architecten, Oisterwijk (NL)



### 3. Bricks & wood



71 Cortona - Architect: DFM Architects, Tongeren (BE)



64 Corum - Architect: Sylvain Maurissen, Bilzen (BE)



### 4. Bricks & plastering



90 Oud Warande - Architect: Unknown



### 5. Bricks & natural stone



11 Terra Rood - Architect: ESA Architecten Engineers, Sint-Truiden (be)



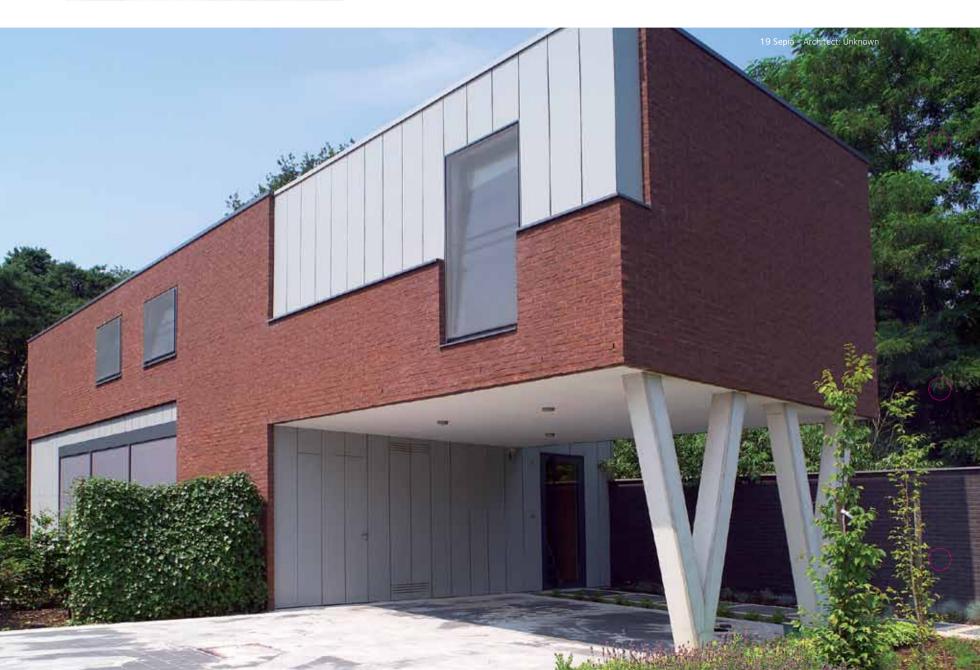
### 6. Bricks & metal



75 Quartis - Architect: Claikens Jenzen Architecten, Tongeren (BE)



7. Bricks & PVC



8. Bricks & .... bricks



Architect: De Twee Snoeken, 's Hertogenbosch (NL)





## **CREATIVE CHALLENGES**

Generally, façades are considered to be straight, smooth outer walls. However, this is not necessarily true. You can do much more with bricks...

### Corners and curves

Profile bricks are a more elegant solution than cutting to create corners and curves in your brick façades. These bricks differ from the standard rectangular bricks with regard to their shape. That is why they are still manufactured by hand. The stock brick is adjusted in such a way that the corner or rounding in the façade can be constructed with the manufactured brick. This way the brickwork bond that is being used is maintained.

We have various types of profile bricks in standard shapes. Do you need a different shape for your project? Vandersanden Group is happy to find a solution for you.

More about this in the tab profile bricks..

### Relief

With recessed or protruding bricks that stick out you create relief in a smooth wall. The effect of shadow gives the façade more depth. For reasons of stability and efficiency, the number of centimetres that bricks cab recede or protrude is limited to just a few centimetres.



586 Saumur - Architect: Architectenbureau Rooijakkers + Tomesen, Amsterdam (NL)



### Tip

A recessed course is sometimes jointed using darker mortar in order to extra emphasise the effect of light and shadow.

### Ceilings and corbels

Baksteen die doorloopt op het plafond? Bricks that continue onto the ceiling? Or a corbel that flirts with gravity? Even here you can let your creativity go wild. E-Brick is most suitable for realising special masonry constructions that are difficult or impossible to realise with normal masonry. Well-known examples are hanging masonry and corbels.

The mounting of E-Brick insulation plates results in **light** and quickly placed constructions. Furthermore, after completion you will not notice the difference between the parts with complete bricks and the parts with E-Brick. That is because we manufacture the E-Brick panels from strips of real bricks.

More information about this in the 'Profile Bricks' tab.





156 Kripto - Architect: Unicum Arch. bureau, Tongeren (BE)

A challenge? An idea that you would like to realise? Do not hesitate to contact us.

Together with you, our specialists will search for the most beautiful and efficient solution.



19 Sepia - Architect: XYZ-Architecten, Zutendaal (BE)

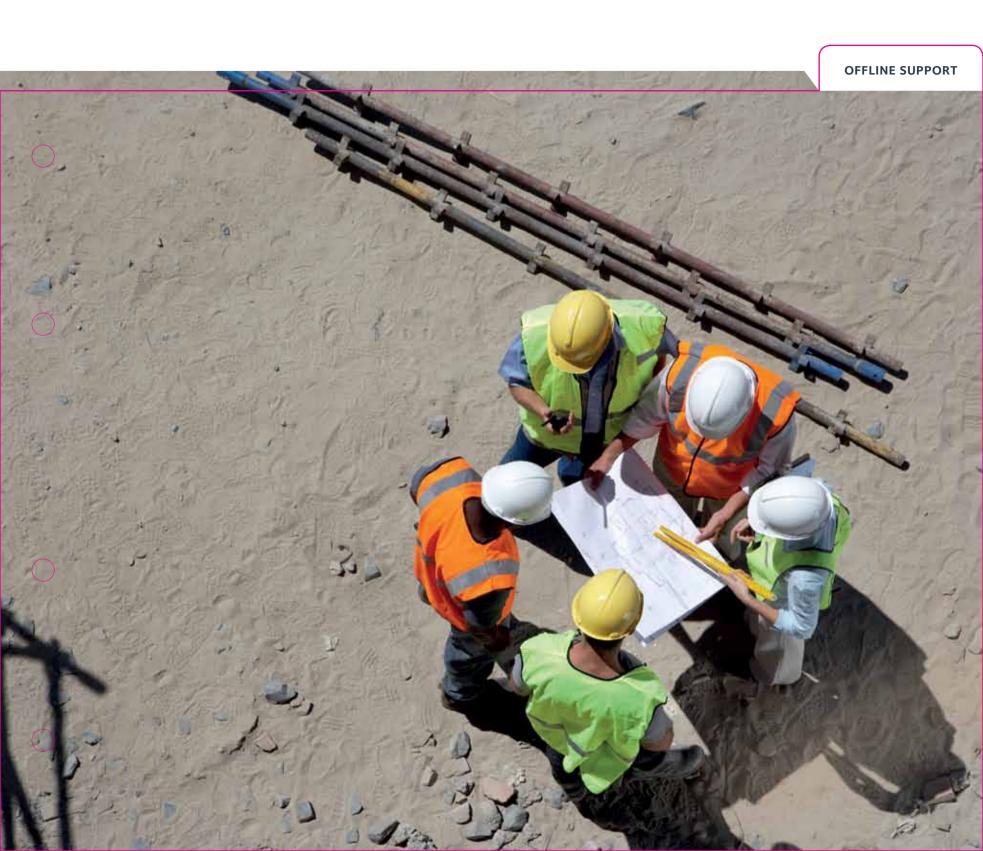














# WORKING TOGETHER FOR A PERFECT RESULT

As your brick manufacturer, Vandersanden Group does everything possible to deliver a beautiful and quality product. We always ensure **good management** of:

- delivery, stockpiling, control, and mixture of the starting materials;
- following the recipes correctly;
- optimal functioning of the machinery;
- a strict quality check, before and after the baking process;
- a correct logistic finalisation.

And we take it a step further: you and your contractor can always count on our **advice** and our **support** when choosing and processing our products.



### Our service for designers

As architect you are partially responsible for the quality of the end result. You meticulously follow the work on the site. In this column we will list the **most important rules** for proper processing of facing bricks. Most of the tips will probably sound familiar to you.

Do you have any specific questions? About the characteristics or processing of a certain brick or brick solution? Do you want a certain colour, but cannot find it in our range of products? Do you want extra background information? Our helpdesk will be happy to help you. You can find all our contact details at the end of this column.



### Our service for contractors

A successful result always depends on the **processing of the facing brick**. A good contractor lays bricks according to the rules of the trade and takes into account the specific characteristics of the facing bricks with which he is working. Do you have any doubts about a certain working method? At Vandersanden Group a team of professionals is always ready to help you design your project. With advice and assistance. Do not hesitate to make use of our service.



### LAYING BRICK, THE RULES OF THE TRADE

### VANDERSANDEN BRICKS

All Vandersanden Group's bricks are made with the utmost care, craftsmanship, and love in order to offer you the highest quality and finishing possible. Our craftsmanship is only shown to its advantage in your project when the bricks are laid according to the rules of the trade. We are happy to provide you and your contractor with a few tips.



#### TIP 1

### Keep the bricks in a safe place

Place the packs on a hard base, such as on wooden beams. Protect the facing bricks against rain, ascending moisture, and splashing dirt.

#### TIP 2

### Mix your facing bricks

You have to mix the bricks from 4 or 5 packages in order to create a nice range of colours without annoying colour differences in the façade surface. The bricks must be picked off diagonally, as indicated on the plan of each package. When the first packages are almost empty, open the next 4 or 5 packages and mix these.

#### TIP 3

### Use a good masonry mortar

Choose a mortar mixture that is suitable for laying facing bricks that have moderate to strong suction. The mortar should also ensure proper bonding. You can test this with the 1 minute test. Lay two bricks against each other and separate them after 1 minute. If the mortar bonds properly then an even amount of mortar will stick to both bricks.



#### TIP 4

#### Protect the first courses of laid bricks

The first courses of laid bricks are often exposed to splashing dirt. Prevent this from happening by protecting them with plastic or spread some brick ruins or gravel around the structure. This way no dirt splashes on it.

#### TIP 5

Do not lay bricks when it is raining and cover the bricks When the fresh masonry has been saturated with water for a long period of time it increases the chances of leaching, laitance, and efflorescence. Therefore, it is important to always cover fresh masonry properly.



#### Timely call on an expert

If you doubt the approach or experience of contractors or DIYselfers, take action on time. And choose an expert. For instance in the case of cleaning masonry: A chemical product is needed to remove laitance, graffiti, oil, grindings, paint, etc. The chance of permanent damage to your facing bricks is very realistic in cases of unprofessional work or cleaning with an unsuitable product.

### More tips?

Request our advice brochure by emailing us. Do you have a specific problem? Do not hesitate to contact us:

### Vandersanden Group Customer Service België

Riemsterweg 300 B-3740 BILZEN (Spouwen) Tel. 089 51 01 40 Fax 089 49 28 45 info@vandersanden.com





## **Zero**®

## Brick laying with ZERO© according the rules of the trade Check the tab about ZERO©.

Zero© is a patented brick that appears to be without joints and that is laid in a traditional manner. Laying bricks without joints is very similar to that of traditional bricklaying. There are however a few differences. In the Zero© tap we list them for you.

### **PROCESSING ADVICE**

## E-BRICK

E-Brick façade panels consist of a layer of highperformance insulation foam (PUR) and high-quality strips made from facing bricks of Vandersanden Group. E-Bricks combine insulation and the aesthetics of facing bricks in one. Due to their light weight and flexible possibilities they form an interesting façade cladding for your new-construction and renovation projects. E-Brick may only be laid by authorised contractors.





You can find an elaborate description of E-Brick along with processing advices in the **E-Brick tap**.

### **PROCESSING ADVICE**



E-Board consists of high-performance grooved EPS plates on which loose brick slips have been applied.
E-Board can be laid by contractors as well as do-it-yourself enthusiasts.

The brick slips, insulation plates, glue, and screws are available as loose parts at our premises.





You can find an elaborate description of E-Board along with processing advices in the E-Board tap.

### **PERSONAL SERVICE**

Do you have a question? A challenge? Doubts? **Our helpdesk** is at your service. You can contact the helpdesk for all your questions about our products, their possibilities, and processing. Do not hesitate to make use of it. You will immediately notice how our personal service makes the difference.





Project bricks are mixed

### Custom-made products

In this folder you will discover our wide range of products. From white to black, from uniform to bright colours. From hand shaped to box moulded to waterstruck. Have you not found for your project what you are looking for? Do you have a specific effect in mind but are you still looking for a suitable facing brick? Ask you question to our helpdesk. We consider it a challenge to make you a suitable offer. Or...to develop the desired facing brick together with you. Especially for your design. For practical and budgetary reasons, this is only possible for large projects. Do not hesitate to contact us for more information.

### Dilatation advice

In masonry in large façades, you need an expansion joint. Such a joint absorbs shrinking and expansion. Our specialists are happy to provide **dilatation advice** for larger projects. Please contact our helpdesk for this.



## Do you have a problem or are you in doubt?

Do you doubt something? Does your contractor have a problem at the site? With a product or the processing of a product? Always immediately contact us. Our helpdesk will be happy to help you.

## These are the contact details of our helpdesk

Vandersanden Group Customer Service Export

Riemsterweg 300 B-3740 BILZEN (Spouwen) Tel. 089 51 01 40 Fax 089 49 28 45 info@vandersanden.com





For us it is a matter of honour to illustrate all the products in this folder as **realistic as possible**. However, photography and printing remain only a representation of reality.

## A sample says more than 1000 images.

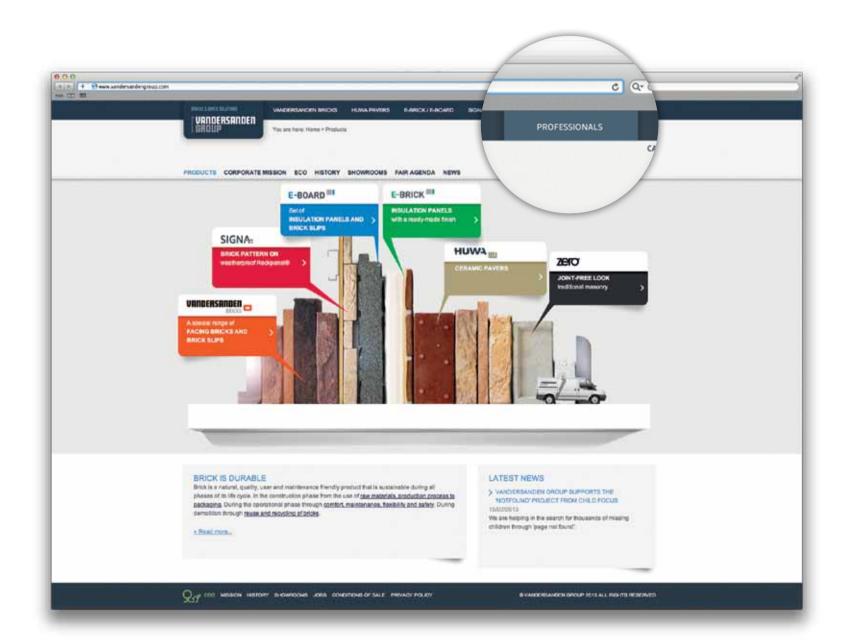
You can always **request a sample box** of a specific facing brick or a **panel in the desired joint colour.** 

For the series Attitude, Impulse, and Intense we developed **compact architect panels**. These double standing panels offer you an overview of the colour spectrum for each series They are light and very handy. Feel free to request one.

## Please call our sample service via the helpdesk:

Vandersanden Group Customer Service Export Riemsterweg 300 B-3740 BILZEN (Spouwen) Tel. 089 51 01 40 Fax 089 49 28 45 info@vandersanden.com







### WWW.VANDERSANDENGROUP.COM ASSISTANCE AND HANDY TOOLS

It is worthwhile to discover www.vandersandengroup.com in detail. On our website you will find, among other things, quite a few **handy tools** for giving you projects added value using facing bricks. We are happy to draw your attention to some of these tools:

- CE cards
- 3D mappings
- E-Board calculating tool
- Elaborate processing advice
- Brochures and folders
- The product selector with handy colour palette
- And of course our latest items, realisations, tips, distribution addresses ...





### CE card

You can download a **CE card for each facing brick**.

This technical card includes::

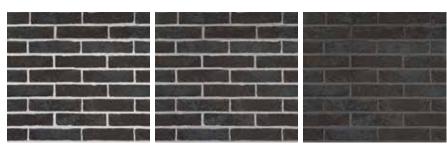
- A colour description
- The available formats
- Specific characteristics, such as the average pressure strength, dimensional tolerance category, dimensional range category, form stability, ...

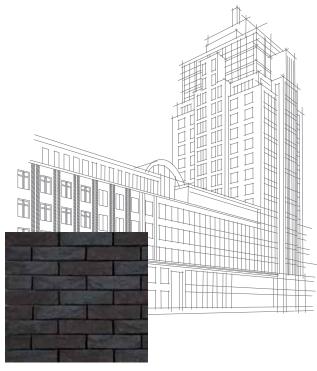


### 3D mappings

You can download 3D mappings for each facing brick. By integrating the 3D mapping in your drawing programme you can see beforehand the effect of the chosen facing brick on your creation.

When you download a 3D mapping, you get a folder with 4 JPEGs: 4 times the same facing brick, each time with a different joint colour or without a joint.







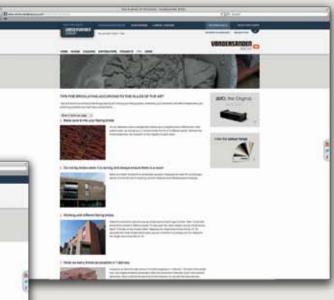
### E-Board calculating tool

With the calculating tool you can **quickly and easily** calculate how much material you need when you use E-Board for your project or house. In addition, if you want, we will send you an indicative quotation by e-mail. This e-mail also includes an overview of your entry and an example order form for a dealer of your choice.

### Processing advice

From laying bricks according to the rules of the trade, placing brick slips, to fastening E-Brick panels: our website includes **handy tips** and elaborate processing advice. Our complete step-by-step manuals are easy to download and print.

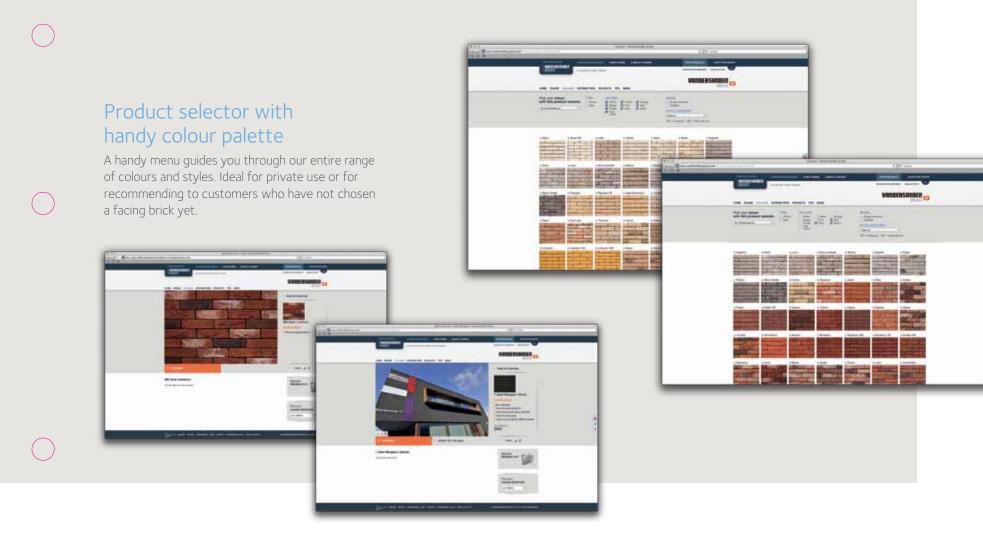






### Brochures, folders, and a newsletter

A brochure or a folder? Spare the environment and download them on our website in PDF format. You can also register here for our **electronic newsletter** for professionals.



Make sure to regularly check our website at www.vandersandengroup.com

43 Argentis Architect: A2O Architects, Hasselt (BE), Crepain Binst Architecture, Antwerpen (BE), m² architecten, Antwerpen (BE) en Cleuren - Merken, Bilzen (BE)









Shiner masonry



Want to show your achievement here or on the website? realisatie@sandersanden.com











## THE RIGHT FACING BRICK: AN IMPORTANT CHOICE

The façade is the face of the project. Choosing the **right facing brick** is therefore crucial for the end result. At Vandersanden Group we want to make that choice as easy as possible:

- by offering you a range of bricks as wide as possible with variations regarding the surface texture of the facing bricks, the format, and the colour;
- by presenting our range of bricks as orderly and correctly as possible.

#### A clear overview based on colours.

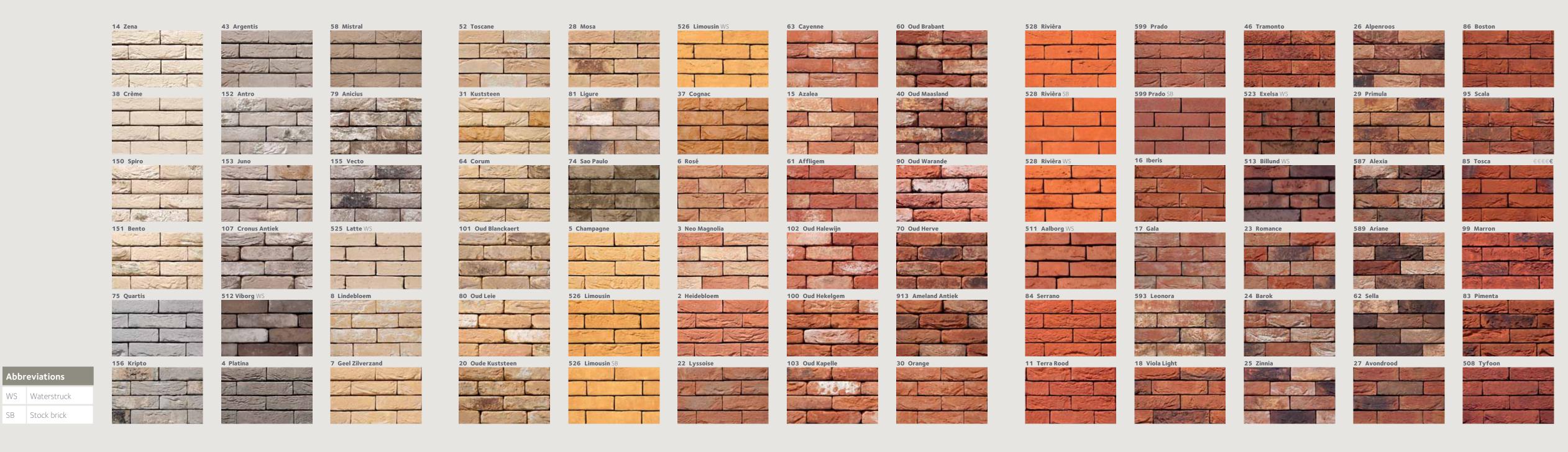
Below you will find a card with an overview of our entire range of facing bricks. All the bricks have been grouped according to colour. After that you will find information cards per brick according to the same grouping.

### Tip

Are you looking for a specific brick according to name or product number? Use the overview lists that are arranged based on name or product number. In the column 'Matrix" you will see the place (column: 1–15 + row: A–F) of that brick on the colour card.









BRICKS & BRICK SOLUTIONS

### TVANDERSANDEN GROUP

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### ZERO® IN A NUTSHELL



97 Robusta - Architect: Ten Dam De Leeuw, Diepenheim (NL)

## Traditional masonry without visible joints

Do you want to build a modern masonry with traditional bricks but monolithic (without joints)? Especially for you, Vandersanden Group has developed Zero®, the patented brick without visible joints that is laid in the traditional way.

Customers get the cleanly designed façade they are dreaming of. The contractor and his workers can continue to work in their preferred manner: in the traditional way with mortar and trowel.

### The basic idea: an integrated mortar bed with opening

- The ZERO® bricks have a special recess at the top in which there is also a central oval opening.
   The mason applies the mortar in that mortar bed in the traditional way.
- The mason places the next course of bricks in a tilting movement from front to back. That is how he divides the mortar in the mortar bed. This way, excess mortar is pushed to the back where you can scrape it off with a trowel. This tilting technique avoids any mortar residues on the front of the brick.
- In the front you hardly see the joint.





# WHY CHOOSE ZERO®?

1.

Clean, modern lines.



68 Safora - Architect: VAB Rijssen bv, Rijssen (NL)

3.

**Quick processing** in a way that any contractor can carry out.



97 Robusta - Architect: M30 Architecten, Oisterwijk (NL)

2.

#### Bricks in their purest form.

2. The joint colour does not influence the colour of the brick. Result: a pure, cleanly designed brick façade that fits perfectly with modern projects.



No jointing, and thus no scaffolds for carrying out jointing. This saves time and money.



No special equipment is needed. The jointless façade can be laid in a traditional manner with a trowel and mortar.



97 Robusta - Architect: Almbouw, Giessen (NL)

Excellent cavity ventilation due to the thin, open vertical headjoints.



Slower ageing of the façade:

bricks get less filthy than joints. You are choosing a durable, user-friendly and maintenance-friendly façade.

#### Practical

#### Do you need more bricks per m<sup>2</sup>?

Yes, in masonry without joints the facing brick plays a more prominent role. The joints are reduced and the linear measure of the brick is adjusted to this. You need approximately 90 bricks per m<sup>2</sup>..

#### How much mortar do you use?

You use approximately 30 kg/m² (of course this also depends on the mason).

and answers about Zero® at www.zerobrick.com.



## Vandersanden Group advises ...

Every day a building site starts working with Zero® bricks somewhere. Therefore, we continuously gather knowhow. We are happy to share this knowhow with you. At www.zerobrick.com you can find detailed technical manuals for easy and perfect finishing. A printed version of this manual is also available.

Do you want to know more? Email us at service@vandersanden.com





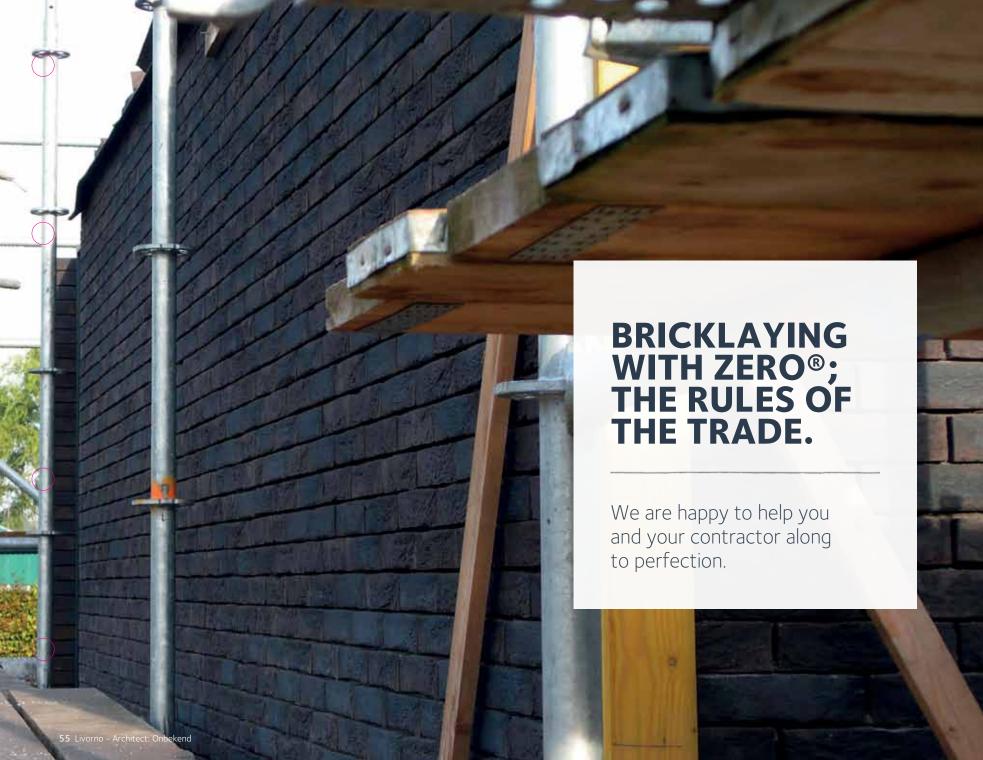


45 Lithium
Architect: A2O architecten, Hasselt (BE)



1 Zwart Mangaan Architect: Willems en U, Eindhoven (NL)





#### Calculating the brick size

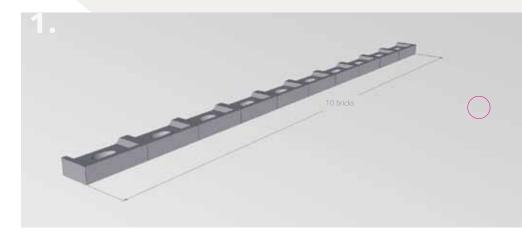
Take 10 random Zero® bricks from different packages and lay them lengthwise one after the other. Measure how long the row is, divide that by the number of bricks and add to that an average joint thickness of 3.5 mm. The length that comes out is the one that you use for dividing all the facades. Check you calculation by repeating it with other bricks.

#### An example:

The total length of a row with 10 Zero® bricks is 2040 mm. The average length of a brick is therefore 204 mm. The size at the site concerned is calculated as following: 204 mm + 3.5 mm (average joint thickness) = 207.5 mm. This measure is then used for plotting the facades.

#### Tip:

- Make a measuring rod with this calculated measure.
   You can use this rod for the entire construction.
   This way you can easily maintain you stretcher bond.
- Unload the bricks always diagonally from a package, never horizontally. It is best to mix bricks from at least 4 packages.



#### Beware!

- The size of Zero® bricks can slightly differ depending on the production location and the production series.
   The size of the brick can only be determined when the bricks are delivered to the building site.
- Are you using different colours in the project? Determine the measure per brick colour.
- Do not use an object to determine the joint (such as a piece of the meter or a plastic plate). Zero<sup>®</sup> is a manually moulded brick: the individual bricks can differ from each other.
- You should of course take the plan into consideration when you continue to plot according to this size at the site concerned. If you continue plotting with fixed vertical head joint lengths, you will not be able to continue the stretcher bond and you will have a lot of grinding work.

#### Calculating the course measurement

Take 10 random bricks from different packages. Stack these one on top of the other and divide the total height by the number of bricks. Add to this the average joint thickness. This average measure determines the course measurement layer size.

An example: The total height of 10 bricks is 510 mm. Divide that height by 10 bricks. The result is the course measurement. In this case it is 51 mm. In addition, a minimum joint thickness of 3 mm and maximum 5 mm should be maintained. Say you are using a joint thickness of 4 mm, then the course measurement is 55 mm.





## **3.** Choose the right mortar

The quality of masonry without joints with Zero® facing bricks does not only depend on the quality of the bricks. The quality of the mortar is also very important. A ZERO® brick comes with an oval hole at the centre in the lowered mortar bed. When laying, the mortar 'creeps' along both the bottom and the top in this opening, resulting in an increased laying surface, which significantly raises the bonding value. This means that a normal-quality mortar is more than adequate for ZERO® brickwork.

#### Tip:

The Zero® bricks must be air-dried when being laid. In case of high temperatures the masons must moisten the masonry afterwards.





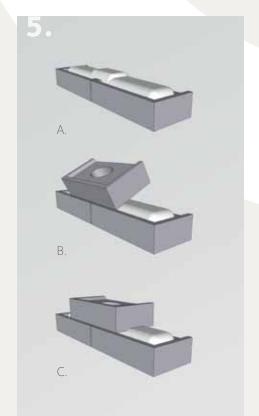
With Zero® masonry that has been applied correctly there is a lot less visible mortar than with classic masonry. Nevertheless, an unfitting mortar colour can be disruptive. For a uniform effect we recommend using colouring on colouring mortar (for example red mortar with red bricks). Numerous mortar manufacturers offer a wide range of coloured mortars specifically for masonry without joints. For more information we are happy to refer you to the builder's merchant.

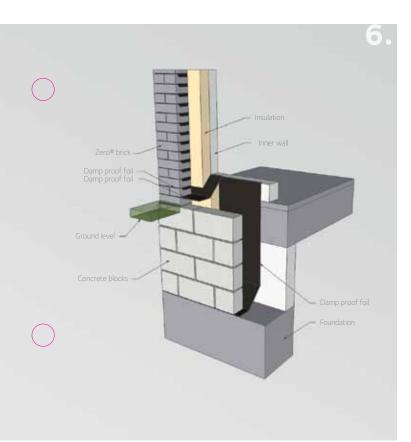
#### Tip:

You can also choose a darker mortar that emphasises the shadow effect of the joint.

## **5.** Tilt the bricks

Apply mortar in the mortar bed with the special oval opening. Make sure that mortar does not spill on the sides. Lay the next course of bricks in a **tilting movement from front to back**, so the mortar is divided in the mortar bed. This way, the excess mortar is pushed to the back where you can scrape it off with a trowel. This tilting technique avoids any mortar residues on the front of the brick.





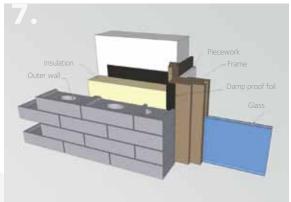
## Create a moisture-proof layer under the surface level

Lay the first courses under the surface level with **regular**, **full bricks**. In order to prevent rising moisture, it is best to place **moisture-proof foil** between the course of bricks under the surface level and the next course of bricks on top of it. First apply some mortar to the course under the surface level. Place the foil on top of the mortar and add some more mortar on top of the foil. Then lay the first course of bricks above the surface level.

It is recommended to build in the moisture-proof course using a slightly **thicker** layer of mortar. Usually, this joint is not visible. However, if you decide to use the 4 mm joint for aesthetic reasons, we recommend to glue this foil with polymer.

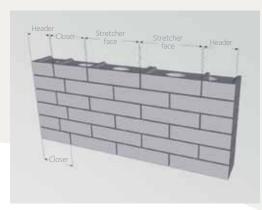
## **7.** Create a vertical moisture barrier

In order to prevent draught and water from seeping in along the door frame and the windows, it is best to place foil with a draught strip, if necessary, against the window.



## **8.** Use closures

Though a building is plotted properly, the size of the headers is not always correct, such as in the case of an opening between two walls. In order to maintain an aesthetic appearance of the masonry, the facing surfaces may only be constructed with bricks that are the same size as the header or larger. The solution for this problem is closures. The size of the closure brick can vary depending on the situation. Practice has shown that this way the bond is the least disrupted.



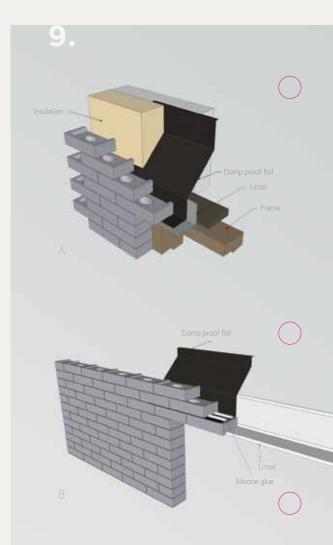
### 9.

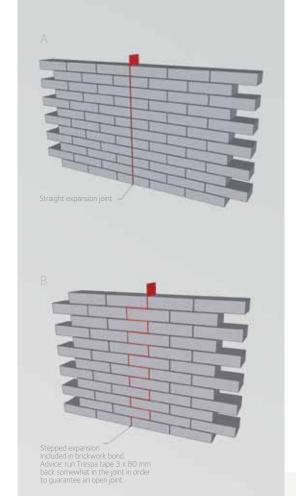
## You can place brickwork bearers or lintel beams in 2 ways

- A **A.** The lintel beam or brickwork bearer is visible. The brick is laid with the mortar bed (special opening) on top of the lintel beam or brickwork bearer. When you place this bearer, you need to take the gauge rod into consideration. The space for the lintel beam or brickwork bearer must be provided at the bricks under the bearer. The door/window frame must therefore also be lowered. The standing sides of the brick can be removed with this
- B The lintel beam or brickwork bearer is not visible. The Zero® bricks are place upside down on the bearer (with the mortar bed or opening facing downwards). The brickwork bearer must be placed high enough in order to let the gauge rod continue uninterrupted. How high above the bearing this bearer should be placed depends on the thickness of the bearer. The course above the upside down Zero® course must be glued.

#### Beware!

- The bricks that are laid on the lintel beam/
   brickwork bearer must be laid cold on the steel.
   This prevents damage as a result of any expansion of the steel.
- Also take at least 10 mm of free space into account; after all, the brickwork beamer can bend.





## You can make expansion joints in 2 ways

- A **Straight expansion:** A. this must be open by 5 mm or by 10 mm when using liners and putty seam.
- B Stepped expansion: B. this must be open with built-in conductor so that the façades can move freely from each other.

  This conductor can be foil or a thin foam band of 7 or 8 cm wide and 3 mm thick. It has to be a building physical expansion on the surface of the façade and can thus not be built in the corners of a building.

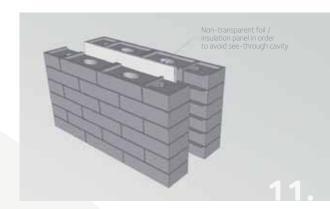
## **12.** Flat roofs

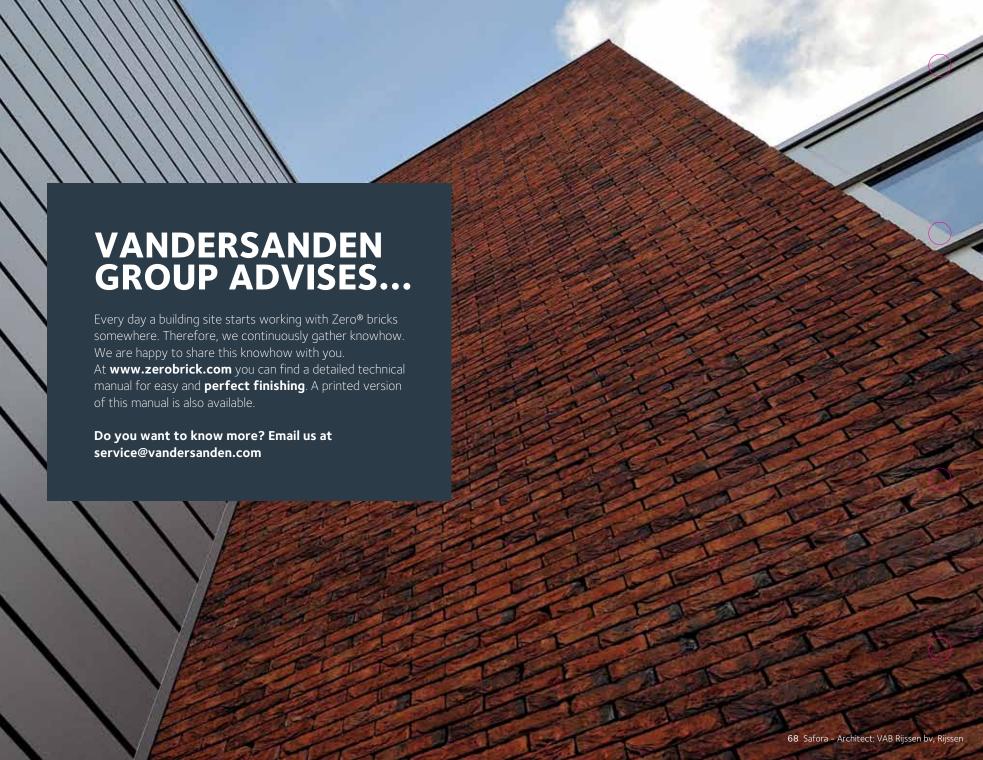
We recommend laying the upper course of Zero® bricks with the mortar bed (special opening) downwards. This way you create an even surface to which the flat roof can be attached.

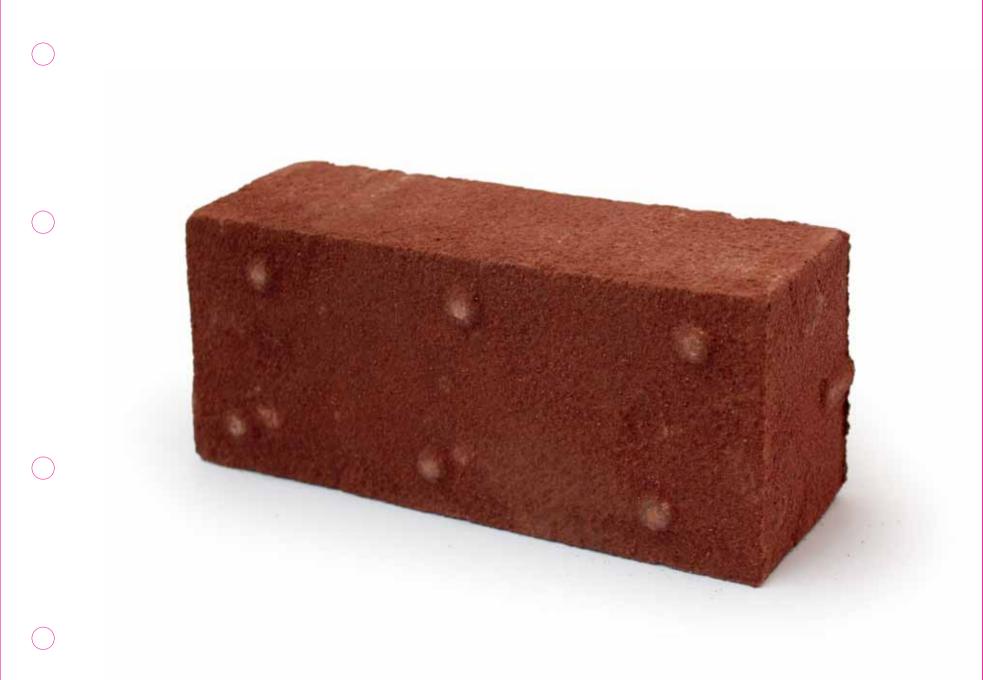
Well then, now you are ready to build facades with Zero® bricks and without joints and to surprise your customers with a timeless and modern product.

## **11.**Garden walls or freestanding walls

By tilting or snapping the bricks you create a freestanding element with an open cavity, such as a garden wall. It is important that this construction has a fixed element in order to prevent 'viewing holes' through the vertical head joints.









### HUWA LAYS THE BASIS

Ceramic bricks not only provide added value to façades, they are also perfect for paving projects around private houses as well as in public spaces. From garden paths, driveways, terraces, to pavements and streets, to parking spaces and plazas. Paving bricks are a very specific product. That is why at Vandersanden Group we have a specialised department for this. HUWA is your address for a wide range of products and professional advice.

#### **Quality guaranteed**

All HUWA paving bricks are manufactured based on a planned method of preparation from high-quality clay sorts. In the production process we use mixtures of fluvial clay, Westerwald clay, and Eifel clay. The HUWA paving bricks are baked at a temperature of approximately 1150°C and they comply with the highest quality regulations. Various quality marks, including the Dutch KOMO certificate and the European CE marking, guarantee consistent and high quality.



#### Durability as an extra argument

- In general, the lifespan of paving bricks is high.
   The average lifespan is estimated at 125 years.
   As a result of quality improvements and increased application among private parties, the expectation is that the lifespan will only increase over the next decades.
- The long lifespan and the high degree of reusability of paving bricks extremely fit in the cradle-to-cradle philosophy.





















704 Médoc



931 Gironde



934 Auvergne



705 Dordogne



710 Morvan



935T Nostalgie Lorraine



704T Nostalgie Médoc



931T Nostalgie Gironde



934T Nostalgie Auvergne



705T Nostalgie Dordogne 710T Nostalgie Morvan





731N Burgos



731NT Nostalgie Burgos



734N Murcia



734NT Nostalgie Murcia



740N Malaga



740NT Nostalgie Malaga



735N Grenada



735NT Nostalgie Grenada





736NT Nostalgie Cadiz

#### **BRICKS & BRICK SOLUTIONS**

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### **COLOURS**

The HUWA paving bricks are coloured in bulk. Over the years, the colour intensity is only increasing.

The HUWA collection consists of **26 different colours** of paving bricks. You can see all the varieties in the colour card. Due to the large variety you can always find a suitable colour or colour combination.











### **SIZES**

All HUWA paving bricks are available in 'Waal' size, Thick size, Long size, and Cobble size.

#### 'Waal' size

± 205 x 50 x 85 mm (± 96 pieces per m²)

#### Thick size

 $\pm 205 \times 67 \times 85 \text{ mm}$  ( $\pm 70 \text{ pieces per m}^2$ )

#### Long size 60

± 236 x 60 x 80 mm (± 72 pieces per m²)

#### Long size 80

± 236 x 80 x 80 mm (± 53 pieces per m²)

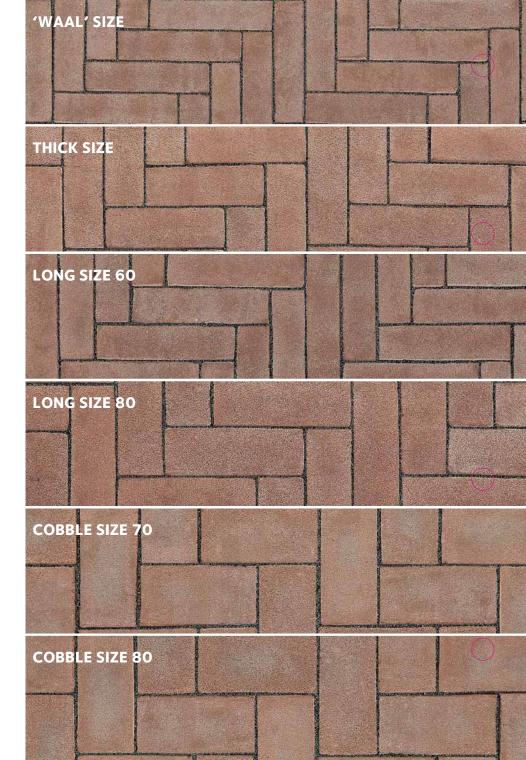
#### Cobble size 70

 $\pm$  205 x 99 x 70 mm ( $\pm$  48 pieces per m<sup>2</sup>)

#### Cobble size 80

± 205 x 99 x 80 mm (± 48 pieces per m²)





### **TYPES**

### Sand-faced or smooth bricks?

Sand-faced bricks are baked with a thin layer of sand. The sand-faced bricks have a slightly matt surface. Smooth bricks (not baked with a layer of sand) are smooth on top. They catch the eye because of their subtle gleam. There is no difference between the two in quality. It is purely an aesthetic choice.









### **TYPES**

#### Tumbled bricks

Sand-faced and smooth bricks can be tumbled after production. Tumbling **rounds** off sharp and austere edges. The bricks get an **archaic look**. They give garden paths and terraces character.









# APPLICATIONS IN GARDENS













# MECHANICAL PAVING WITH PACKAGES FROM HUWA

By investing in a completely automated packaging line, HUWA is able, with the help of robots, to put together mechanical packages.

This way we can supply the demand of the authorities quicker, while mechanical paving also contributes to the working conditions of the road workers.

#### Packages with spacers

Almost all HUWA paving bricks are manufactured with spacers. **The advantages:** 

- the shattering during mechanical processing is limited thanks to these spacers;
- the spacers ensure the necessary joint for element hardening, which contributes to the quality of the laid paving;
- filling the frequent joint pattern with grit, combined with a good underground, allows rain water to drain into the underground.



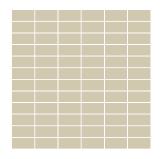








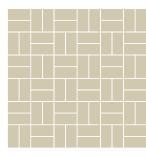
#### Bonds in which packages are available:



Stack (or brick) bond



Stretcher bond



English bond



Herringbone bond



at 45° angle

Cobble sizes are also available in 'upside-

Herringbone bond

Do you have a specific question? Do not hesitate to contact us.

Vandersanden Group Customer Service Export Riemsterweg 300 B-3740 BILZEN (Spouwen) Tel: +32 89 51 01 40 Fax +32 89 49 28 45 info@vandersanden.com

#### Sizes

**'Waal' size** (approximately 205 x 50 x 85 mm)

**Thick size** (approximately 205 x 67 x 85 mm)

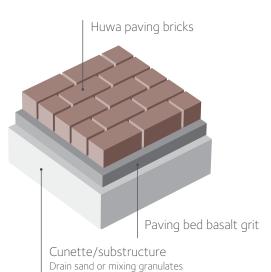
**Long size** (approximately 236 x 60/80 x 80 mm)

**Cobble size** (approximately 205 x 99 x 70/80 mm).

## HUWA permeable paving

Vandersanden Group has developed a system that contributes to decreasing flooding and drying out of the soil.

This system is a permeable paving brick system that disconnects the paving surface from the sewer system. In this way the ideal underground is composed in combination with mechanical paving with HUWA paving bricks.



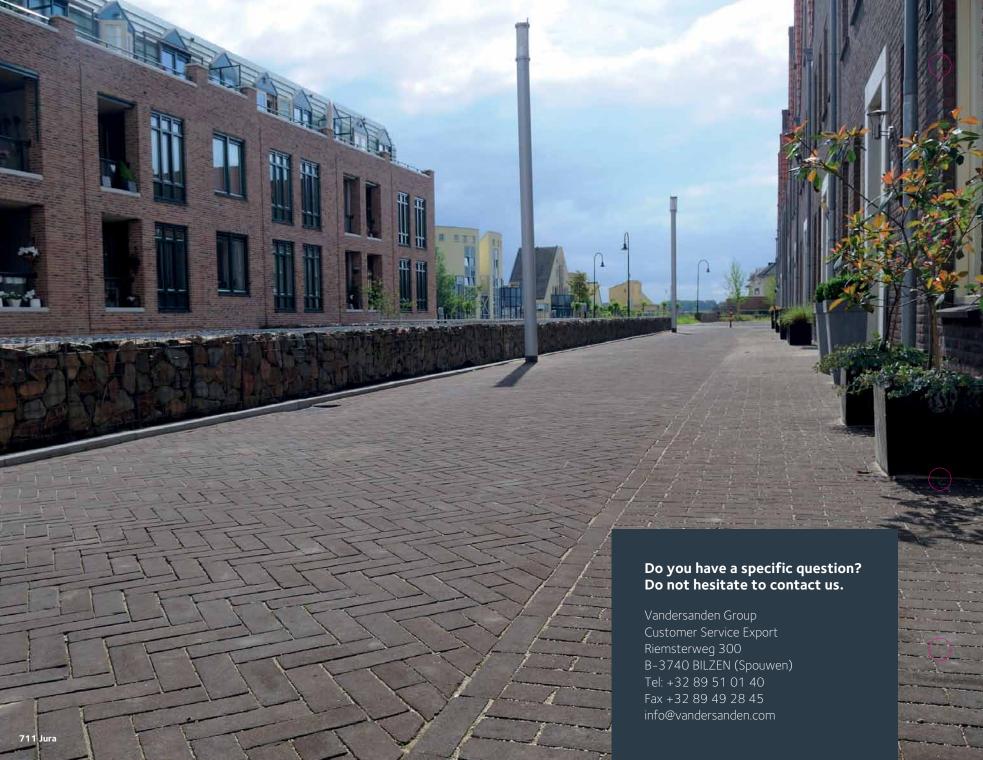




















### **PROFILE BRICKS**

For some project and houses you create **unique architectural shapes** that are not easy to realise with regular facing bricks, such as angles of 135° or round walls with limited diameter. Vandersanden Group offers special moulded bricks for such applications.





We offer a wide range of **profile bricks**. By choosing wisely or combining brick types, you will find made-to-fit solutions for quite some creations.

Our profile bricks are available in **almost all colours** from our wide range.

#### Beware!

Profile bricks are still made by hand and therefore must be ordered **well in advance**.

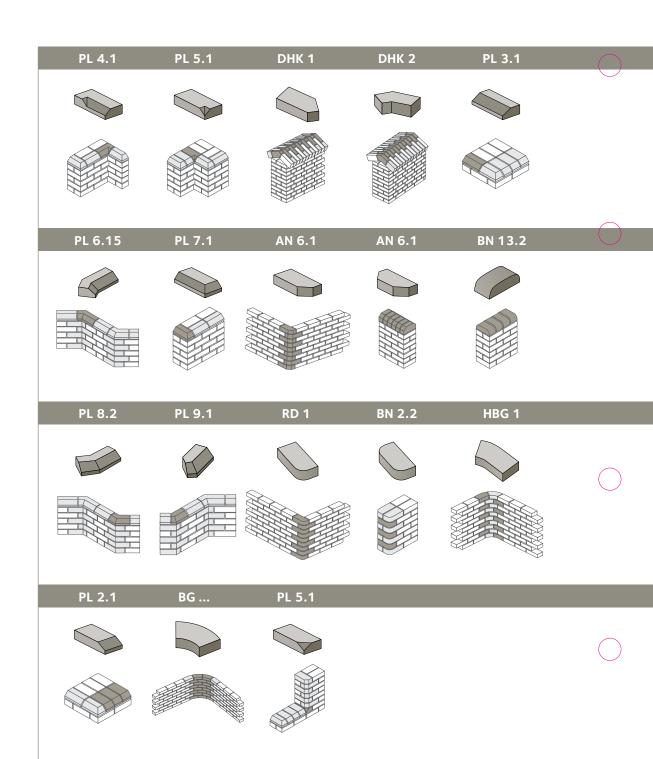
#### Tip

Do you have another type moulded brick in mind? We are happy to examine whether it can be manufactured. Do not hesitate to contact us for more information.

## Do you want to know more?

At www.vandersanden.com you can download the Profile Bricks brochure.

There you will find the latest shapes and measures. Have you not found what you are looking for? Make sure to contact our helpdesk for more help.







### **BRICK SLIPS**

#### **Custom-made products**

Brick slips are the ideal solution for renovating old facades or cladding interior walls.

Once the brick slips have been jointed, they have the same appearance as regular masonry.

Because of their thinness, they offer a huge advantage for exterior façades: maintaining the current position of windows and doors.

This way unnecessary high adjustment costs are avoided. By cladding exterior angles with corner slips, a stretcher bond can still be used.





At Vandersanden Group we mechanically cut our brick slips from original, manually moulded facing bricks. The slips, which are approximately 2 cm thick, have the same Benor and CE qualities as our facing bricks.

Slips and corner slips are available in all standard colours and formats from our wide range. They are light and very handy to work with.

Other interesting applications of brick slips are E-Brick and E-Board, the insulating solutions of Vandersanden Group. You can find everything about it in the E-Brick and E-Board tabs



#### Tip

Order the slips and corner slips that you need in one go. This way Vandersanden Group can guarantee that they are all cut from the same fired series. A brick slip is a natural product. Slight colour differences can occur within the same fired series. Therefore, always mix slips from various packages. This created beautiful colour nuances.

## Do you want to know more?

At www.vandersanden.com you can download the Brick Slips brochure. There you will find more information, fixing advice and tips.



45 Lithium - Architect: A2O Architecten, Hasselt (BE)

# PLACING BRICK SLIPS IN 6 STEPS

### 1. Preparation

Determine the average height of the delivered brick slips. To do so please stack 10 brick slips on top of each other. Measure the total height and divide it by 10. Based on this result you can now determine the layer size.

Please always ensure that the surface is clean and free of dust and grease. In the event of cracks on the surface to be processed, they must first be examined and analyzed before the brick slips can be attached to it.



### 2. The mortar

Vandersanden Group recommends the use of a flexible and frost resistant cement adhesive of class C2TE. The manufacturer indicates that the product complies with CE EN 12004 standards.

This type of cement adhesive is suitable for processing brick slips on concrete or brick walls. For walls of other materials, such as e.g. wood or metal, it may be possible that a different type of cementadhesive needS to be used. For more in depth information, we like to refer to the cement adhesive manufacturer.



### **3.** Mixing of the mortar

Please follow closely the guidelines of the manufacturer concerning the mortar mixing procedure (amount of water added, etc.)



# **4.** Gluing of the wall and the brick slips

Apply glue on both wall and brick slips. This "dual" gluing is necessary to achieve an optimum adhesion effect.







### **5.** Positioning of the brick slips

Attach the brick slip to the wall, push it slightly into its final position and press on it a few seconds to ensure a good adhesion effect. Start with the corners.







## **6.** The jointing

Remove carefully excess cement adhesive. You can then joint the finished wall with regular joint mortar. We recommend trying some joint color samples on a small area of the finished brick slips wall because the joint color has a major influence on the visual end result.







# BEAUTIFUL TIMELESS FINISH AND HIGH-QUALITY INSULATION IN ONE.

Vandersanden Group offers two insulation solutions using brick slips: E-Brick and E-Board. You insulate and finish your outer walls in a single operation. This way your house uses less energy and at the same time, you enjoy a beautiful new façade of bricks. There is no other insulation system for the outer façade that provides the same beautiful and durable result.



### E-BOARD

E-Board is a DIY package consisting of grooved ECO-EPS (Expanded Polystyrene) insulation plates, brick slips in the colour of your choice, glue, screws and edge sections. The insulation plates are strong, retain their shape, can bear loads under pressure, and are not sensitive to moisture. The tongue-groove joints ensure that no thermal bridges occur. Building contractors as well as handy do-it-yourself enthusiasts can affix E-Board. Please refer to www.vandersandengroup.com for more information.

## E-BRICK

E-Brick façade panels consist of high-performance insulation foam (PUR) and Vandersanden quality slips in the colour of your choice. The resulting product is light-weight but extremely strong and reliable. Only building contractors who are trained thoroughly by Vandersanden can affix E-Bricks panels. E-Brick provides interesting possibilities for **new estates** as well as **renovation projects**. Please refer to www.vandersandengroup.com for more information.











## E-BRICK

E-Brick combines high-quality, dimension stable insulation with **real quality bricks** in the colour of your choice.

#### E-Brick façade panels:

- E-Brick façade panels consist of a layer of high-performance insulation foam (PUR) and high-quality slips made from facing bricks of Vandersanden Group;
- they are only laid by contractors who have followed intensive training for this at Vandersanden Group;
- they offer interesting possibilities for your new-construction and renovation projects.



INSULATION & FAÇADE FINISHING WITH BRICKS IN ONE ACTION







## HOW IS E-BRICK MANUFACTURED?

The E-Brick panels are manufactured with brick slips, covered with quartz sand, and coated with liquid PUR.

Result: a light but extremely strong and reliable unit.



## 1. Insulation layer

Polyurethane of 40 mm

## **2.** Quartz sand

The quartz sand between the slips and the PU foam prevents the liquid PU from seeping into the joints and staining the front of the slips. In combination with the PU foam when it is still liquidised, a special PU-quarts mixture (PU-micro concrete) is created in the joints between the brick slips.

## **3.** Brick slips of 20 mm

The facing bricks of Vandersanden Group are cut in strips and corner strips of approximately 20 mm thick. The insulation panels have a very natural look because they are covered with strips from hand-moulded facing bricks; they are indistinguishable from authentic façades made from complete hand-moulded facing bricks. They therefore also have the same characteristics and qualities. The quality of the bricks is regularly inspected in order to guarantee high-quality in conformity with national and European standards.



View the production process.



### **HOW DOES A CONTRACTOR MOUNT E-BRICK?**

In order to guarantee a perfect result E-Brick may only be laid by experienced skilled workers who have been trained by Vandersanden Group. This way we can not only offer the customer 10 years quarantee on the product, but also on the construction.

The panels are delivered at the building site. The contractor can begin work immediately.



1 Placing the starting guide post



2 Placing the corners



3 Mounting the panel



4 Sealing



**5** Applying the connecting strips



**6** Jointing

#### On what kind of surfaces can E-Brick be placed?

- Steel frame constructions

- Cellular concrete Wooden frame construction
- Plastering



### E-BRICK RANGE OF PRODUCTS

Determine and combine the insulation thickness and appearance of the bricks yourself to serve your project. The combination possibilities are almost endless.

#### Insulation thickness

- A standard panel has an insulation thickness of 40 mm. In addition, polyisocyanurate (PIR; improved PUR) can be supplied glued or separately up to an insulation thickness of 140 mm.
   You can choose to use other insulation materials (XPS, EPS, etc.) as the first layer.
- This way any insulation value can be easily reached, even that of a passive house (U  $\leq$  0.15 W/m<sup>2</sup>K for walls).

#### Colour and brick style

You can choose from a wide range of Vandersanden facing bricks: more than 100 colours and styles. Because we use real Vandersanden Group bricks to manufacture E-Bricks!



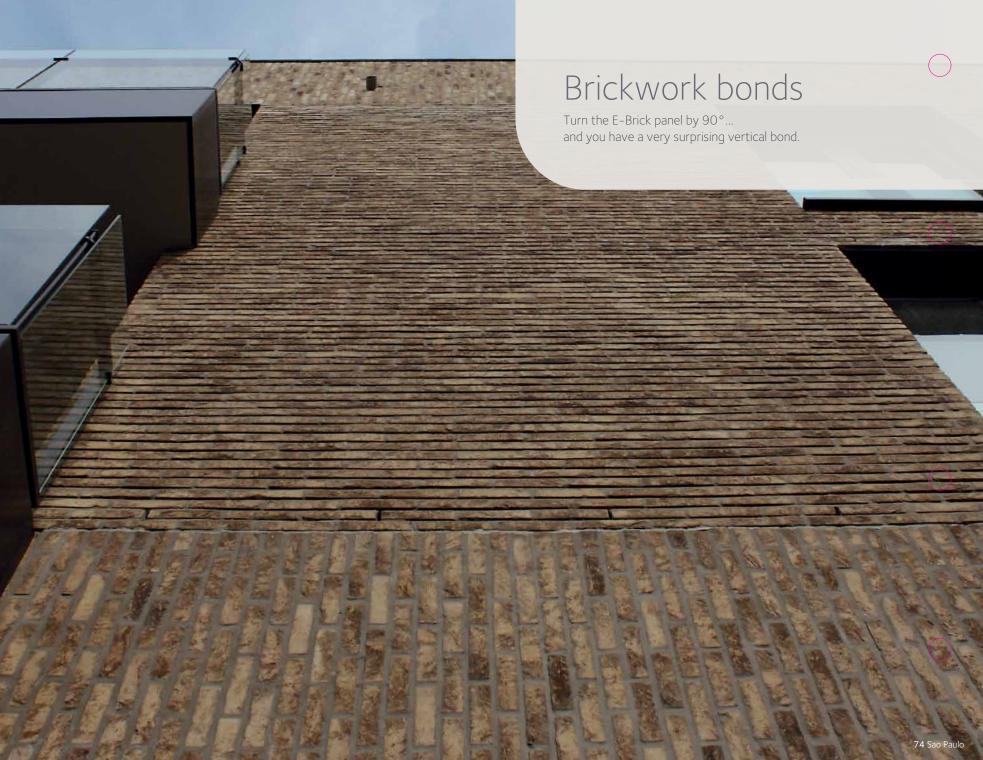
#### Size of the bricks

You can choose between 'Waal' size (215  $\times$  50 20 mm) or Thick size (215  $\times$  65  $\times$  20 mm).

**'WAAL' SIZE** 

**THICK SIZE** 





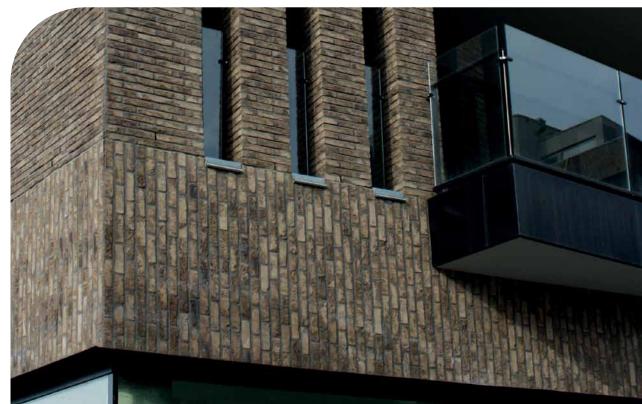
#### **Brickwork bonds**

The **stretcher bond** is by far the most common brickwork bond. E-Brick is therefore manufactured in this bond. **Stack bond** is also available.

Since 2012, E-Brick is also available in **irregular bond**, thought only finished with 'Waal' size brick slips (21/5 cm). Characteristic of this brickwork bond is that there is no visibly noticeable brick pattern. The length of the slips varies but is never less than the length of a header (10 cm).









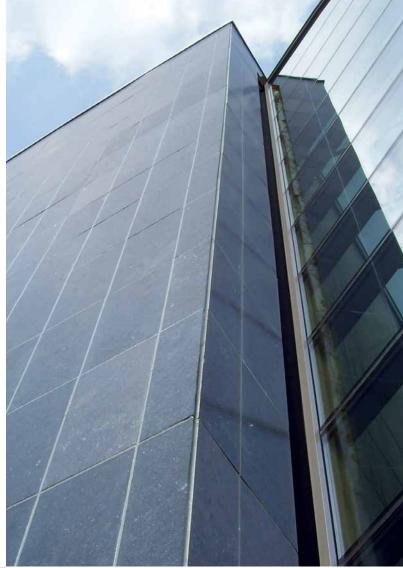
### **EXTRA POSSIBILITIES**

1. E-Brick is also available in natural stone/bluestone. Ideal for the bottom of a façade in more classic houses.
Or for entire façades or original touches in contemporary projects.

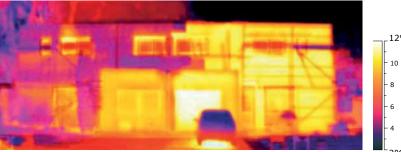
There are special angle sections and window finishing sections to finish the façades that you clad with E-Brick

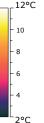
up to the smallest detail.











#### No need for a new foundation

**OF E-BRICK** 

#### The undeniable advantages of outside insulation:

- no loss of interior space;
- eliminating thermal bridges;
- choice of insulation thickness (between 4 and 14 cm).

#### Much shaping flexibility due to lightweight and orientation possibilities:

- ideal for carrying out daring coverings
- perfectly suitable for ceiling finishing with facing bricks
- handy material for realising otherwise complex shapes in an easy manner.

#### **Uniform appearance**

- Is indistinguishable from traditional masonry constructions
- Even in combination with laid bricks, professionals cannot tell the slips from the regular bricks (slips are made from the exact same facing bricks)



Ceiling finishing with facing bricks



Lightweight coverings





- mechanically mounted, no foundation needed;
- difficult constructions, such as ceilings and corbels, are easier to realise.

#### **Cost-reducing**

- many bricklaying hours are saved when working on difficult constructions;
- insulation and façade finishing in 1 action;
- speed of finishing.

#### **Guaranteed quality**

- a certified product in 4 countries: Belgium, Great Britain, France, and Germany;
- 10 years product guarantee on quality and insulating capacity.









Belgium (ATG 10/2819)
The Netherlands (IKOB BKB pending)
Great Britain (BBA 07/4403)
France (AT 2/11-1466)
Germany (Dibt Z.33.5-1110)
Europe (ETA pending)



- 2-in-1: excellent insulation and façade finishing with hand-moulded facing bricks;
- saves on costs of extra foundation;
- **unlimited choice of colours** thanks to the wide range of facing bricks of Vandersanden Group + natural stone;
- **perfect insulation**: wind and water proof, but vapour permeability;
- increases the value of the building thanks to the insulation and the new look;
- saves up to 40% of the heating costs thanks to perfect heat insulation;
- various subsidies are available depending on the chosen insulation thickness (in various countries subsidies are available for the insulation of walls, so make sure to check it out!);
- maintenance-free material

















Before



Before

### Renovation

Due to the light weight of the façade panels and the mechanical attachment without foundation, E-Brick is ideal for an insulating make-over of older and damaged houses.



After



View more realisations at www.vandersandengroup.com > E-BRICK > REALISATIONS





E-BRICK -

The E-Brick panels are manufactured with brick slips covered with liquid PUR so that it creates a strong unit.

The PUR is continuously tested in order to maintain high-quality.



# FAQ

## 1. How does the contractor finish the window-sills?

In case of renovations the system is mounted to the outside of the old façade. As a result the window-sills will most likely no longer be deep enough and will need to be replaced for new ones or will need to be extended with a window sill extension.

## 2. How does the contractor finish the windows?

If it turns out that the entire reveal of the window will be covered with E-Brick then the sides and/or top can be grinded. However, this may only be done if the load bearing capacity of the lintel beams is maintained. Another option is using a thinner or no insulation place on the reveal, but this is not the preferred choice.

#### 3. Do the brick slips not fall off?

No, E-Brick panels are frostresistant and waterproof. Vandersanden Group only supplies the best mortar glue that guarantees optimal bonding for placing the connecting strips.

## 4. Where can I view realised projects?

Send an e-mail to info@vandersanden.com for a reference list in your neighbourhood.

## 5. Who is allowed to place the system?

Every contractor can follow free training at Vandersanden Group to become a qualified E-Brick fitter. Contact us for more information at infor@vandersanden.com

## 6. Are there more possibilities?

We continuously work on further developing E-Brick. We are also interested in your ideas. Contact us and together we will examine the possibilities.

## Do you have a specific question?

Are you looking for a different brick, a special bond, or a unique mix? Do you have plans to build a daring covering? Our specialists are happy to examine how E-Brick can have an added value for your project.

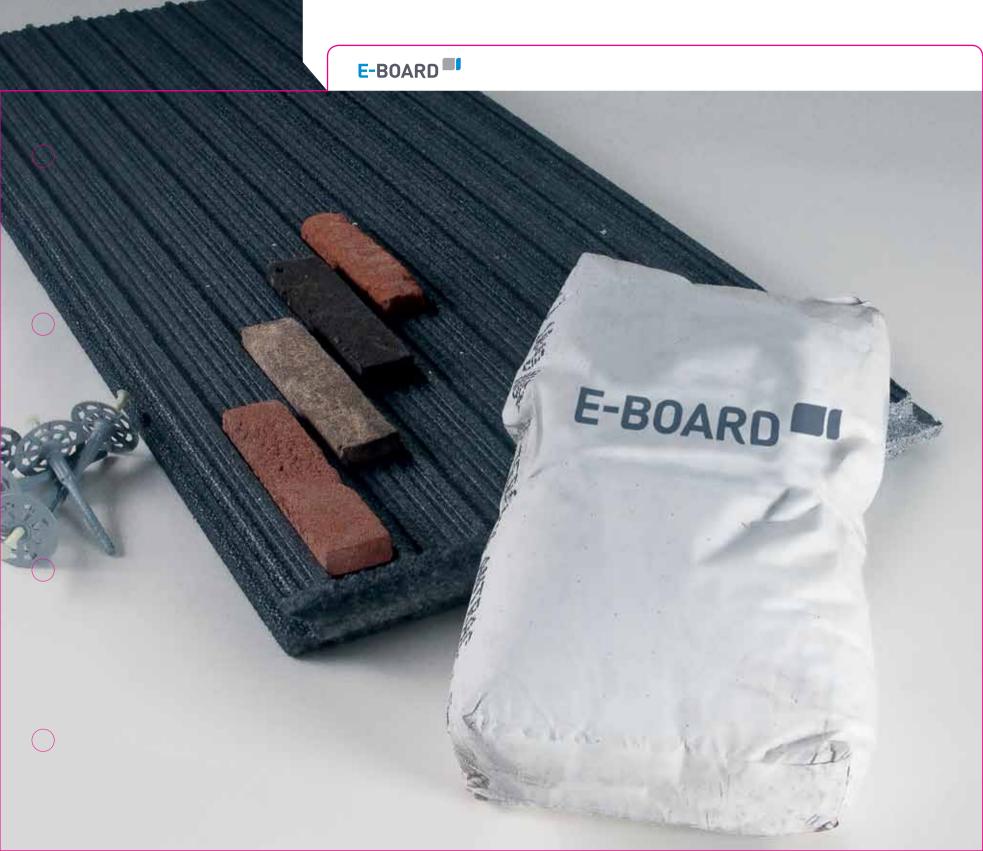
Do not hesitate to contact us.

#### Vandersanden Group Customer Service Export

Riemsterweg 300 B-3740 BILZEN (Spouwen) Tel. +32 (0)89 51 01 40 Fax +32 (0)89 49 28 45 info@vandersanden.com









## E-BOARD

E-Board consists of high-performance grooved Expanded Polystyrene (EPS) plates on which loose brick slips have been mounted.

#### E-Board:

- is the ideal brick solution for façades with many details;
- can be affixed by contractors as well as do-it-yourself enthusiasts;
- with its ribbed plates it offers 40% more **bonding strength** than flat plates.

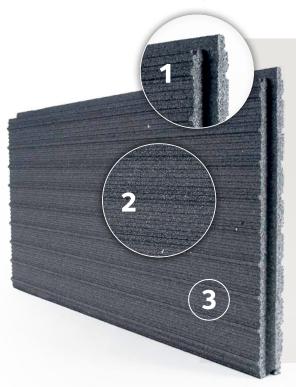






## HOW IS E-BOARD MANUFACTURED?

E-Board panels are made from ECO-EPS. The closed cellular structure holds the air and is therefore an excellent insulator. The material is strong, retains its shape, can bear loads under pressure, and is not sensitive to moisture.



- Tongue & groove joint
  This ensures that **no thermal bridges** occur
  between the plates.
- 2 Ridges

  The advantage of horizontal ridges is that the strips can immediately be mounted straight.
- Waterproof
  The non-capillary function of the insulation plates combined with waterproof glue quarantees a waterproof system.

# On what kind of surfaces can E-Board be placed?

- Concrete
- Existing masonry
- Cellular concrete
- Wooden frame construction
- Plastering
- High-speed building
- Steel frame constructions

## HOW DOES A CONTRACTOR OR DO-IT-YOURSELF ENTHUSIASTS AFFIX E-BOARD?

The dealer supplies the brick slips, the insulation plates, the glue, and the screws **as separate items** to the building site. The customer or contractor can begin work immediately.



1 Apply the glue
The plates can easily and quickly be
affixed to each other thanks to the tongue
& groove system.



2 Drill holes



3 Knock in the hammer-in fixing.



4 Spread the glue



**5** Affix the brick slips

Due to the horizontal ridges you can mount the strips straight. The ribbed plates offer 40% more bonding strength than flat plates.



**6** Jointing

## Would you like a complete technical manual?

Contact us via: bricksolutions@vandersanden.com or via +32 (0)89 510 140 (Belgium

### ADVANTAGES OF E-BOARD

#### Can be mounted on any wall type

- · mechanically mounted, no foundation needed;
- the classic advantages of outside insulation;
- no loss of interior space;
- · choice of insulation thickness (between 4 and 30 cm).

#### Ideal for eliminating thermal bridges

#### **Uniform appearance**

- is indistinguishable from traditional masonry constructions;
- even in combination with laid bricks, professionals cannot tell the strips from the regular bricks (strips are made from the exact same facing bricks).

#### **Guaranteed quality**

- Vandersanden Group guarantees the quality of all the components of the system;
- certification upon request.

#### Insulation and façade finishing in one



Uniform appearance



Can be mounted on any wall type



## A WIDE RANGE OF PRODUCTS

You have a choice of 4 different sizes of brick slips (M50, M65, 'Waal' size or Thick size) and of the entire range of hand moulded facing bricks of Vandersanden Group. That is more than 100 colours in the most varying styles.

M50

'WAAL' SIZE (WS)

M65

THICK SIZE (TS)



## EVEN SUITABLE FOR PASSIVE BUILDING

You have a choice of insulation plates between 40 mm and up to 300 mm thick. This way any insulation value can be easily reached, even that of a passive house ( $U \le 0.15 \text{ W/m}^2\text{K}$  for walls).

**Result:** substantial energy saving and cost recovery in a very short time.



### **ALL BRICKWORK BONDS**

All brickwork bonds are possible because the contractor or do-it-yourself enthusiast affix the brick strips himself. Now we even offer E-Board ZERO®: brick slips without joints that you mount on insulation plates especially designed for this purpose.



### TIP: E-BOARD ZERO®

With E-Board ZERO® you create a **brick façade without joints**, similar to glued facing bricks or traditional masonry with ZERO® facing bricks. Vandersanden Group developed special insulation plates for E-Board ZERO®. The fine, horizontal ridges, which ensure better bonding of the glue mortar, are still present

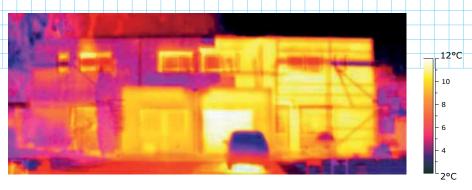
However, the thicker ridges, which indicate where the joints should go when using the regular E-Board, are no longer there. Instead, plumb line holders with plumb line ensure that you lay the brick slips straight and beautifully. The glue mortar of the E-Board ZERO® package is darker. This emphasises the shadow lines of a façade that does not have joints.



### **CALCULATION TOOL**

How much does E-Board cost for your project?
Use the handy calculation tool at www.e-board.be.
You can calculate quickly and easily how much building material you need. In addition, you will receive an indicative quote via e-mail. This e-mail also includes an overview of your entry and an example of an order form for a dealer of your choice.





### **TIP**

With an insulation thickness of 8 cm you already achieve an R-value of 2.

### SUBSIDIES FOR WALL INSULATION

Make sure to inform the customer that E-Board is eligible for government subsidy when placed by an certified contractor. Exterior wall insulations have subsidies. Check the applicable subsidies in your country.









### E-BOARD REALISATIONS

View more realisations at www.vandersandengroup.com > E-BOARD > REALISATIONS



### **TECHNICAL CARD**



E-Board panels are made from ECO-EPS. The closed cellular structure holds the air and is therefore an excellent insulator. The material is strong, retains its shape, can bear loads under pressure, and is not sensitive to moisture.

Insulation value Improved insulation value as a result of adding graphite/ aluminium powder/carbon	0.032 W/mK
Fire retardant	SE (Eurokl. E)
Thickness	40 - 300 mm
Measurements TS/M65 7 courses of bricks, gauge rod 76 mtm	1230 x 532
Measurement WS/M50 9 courses of bricks, gauge rod 62mm	1230 x 558
Tongue & groove joint	yes
No sun blindness due to grey colour	yes
CE marking	yes

#### Hammer-in fixing

Due to their new and innovative design the hammerin fixing for use in standard foundation are very suitable for solid and quick mounting of the insulation plates.

#### CHARACTERISTICS

Thermally interrupted hammer-in fixing with nylon hammer-in head and countersunk pin.

#### Suitable for the following foundations:

Concrete blocks

Calcarenite High-speed building

Drilling diameter: 8 mm Dish diameter: 60 mm

Packaging: 100 units per package Lengths: 110 tot 300mm Anchoring depth: At least 35 mm (+ 10mm extra drilling depth)

CE and ETA marking

If the underground is cellular concrete then hammerdrive plugs with screws are supplied (CE and ETA marking).

#### Mortar glue

Industrial dry mineral mortar in conformity with DIN 188557 that – according to its characteristics – complies with mortar group P II and is water-repellent in conformity with DIN 18550. Made from standardised mineral binding agents, calibrated mineral additives and special bonding substances.

#### CHARACTERISTICS

**Processability:** > 5 ° C

The processing time is between 1 to 3 hours depending on the weather conditions.

It is packaged in sacks of 25 kg, stacked on euro-pallets.

### **Brick slips**

According to specific technical cards (depending on which brick you choose).



# FAQ

### 1. How does the contractor finish the window-sills?

In case of renovations the system is mounted to the outside of the old façade. As a result the window-sills will most likely no longer be deep enough and will need to be replaced for new ones or will need to be extended with a window sill extension.

### 2. How does the contractor finish the windows?

If it turns out that the entire reveal of the window will be covered with E-Board then the sides and/or top can be grinded. However, this may only be done if the load bearing capacity of the lintel beams is maintained. Another option is using a thinner or no insulation place on the reveal, but this is not the preferred choice.

## 3. How thick are the insulation plates that are used for F-Board?

E-Board is available in various thicknesses varying from 40 to 300 mm. If you want, you can also combine the plates with hard insulation plates. This way any insulation value can be easily reached, even that of a passive house (U ≤ 0.15 W/m²K for walls)

## 4. What about the therma conductivity of E-Board?

E-Board offers an extremely low lambda value of 0,032 W/m²K.



# 5. How do I know how many brick strips and hammer-in fixing I need to order?

Vandersanden Brick Solutions is all about one-stop-shopping. You tell us what you want to do on what kind of surface and we will calculate for you what you need: plates, brick slips, hammer in fixing, and mortar glue are all delivered together in the right quantity at the building site.



### Do you have a specific question about E-Board?

Are you having difficulty choosing between E-Board and E-Brick for your project? Our specialists are happy to give you advice. Do not hesitate to contact us.

Vandersanden Group Customer Service +32 (0) 89 51 01 40 (BE) bricksolutions@vandersanden.com

SIGNA-EXPLORE SKETCH CREATE INNOVATE 



### SIGNA IN BRIEF

## Your self-created brick pattern on weather-resistant Rockpanel®

Signa gives a whole new dimension to brick as a facade cladding. This is an innovative facade cladding system that offers you many possibilities for exclusive projects, high-rise buildings or other architectural projects. You can create your own design with expressive facades that fully highlight the character of brick. While at the same time you are opting for a fast result. Do you want a robust or elegantly irregular full-relief facade, entirely according to your individual design with Vertical, horizontal or diagonal patterns? It is conceivable and quickly achievable, thanks to Signa.

**EXPLORE SKETCH CREATE INNOVATE** 



# WHAT IS SIGNA?

**Signa** consists of a weather-resistant Rockpanel® onto which a composition – possibly designed by you – of Vandersanden brick slips is adhesively bonded. The panels are produced for you ready-to-use. In this way you can give your projects a unique and striking look.

"As an architect, you can now play like a virtuoso with relief, colour, format and brickwork bond – and this even in projects where a brick finishing may have initially appeared to be unfeasible."

# TECHNICAL CHARACTERISTICS

### Rockpanel®

The supporting panel on which the brick slips are adhesively bonded in the factory is a form-retaining and weather-resistant Rockpanel® board composed of compressed and solidified basalt rock fibres. The format is variable and can be optimally harmonised with your project.

### Vandersanden brick slips

For the brick slips you can select any brick from the Vandersanden line. This is **regardless of format, colour or direction of saw cut – even diagonally** cut is possible. You also possess an un–precedented degree of freedom with regard to brickwork bonds, combinations of types of brick, repetition of patterns or gradual colour and/ or format variation over the whole of the facade.

You choose the composition and the variations in the relief yourself.

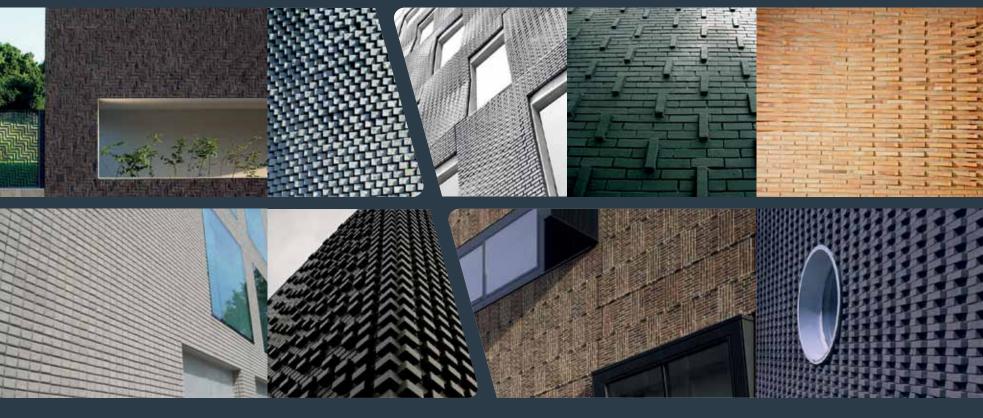




## Signa gives you the freedom to tell your visual story.

Want to emphasise surfaces? Allow textures to contrast? Make use of depth and stratification? Play with the thickness of the material? With Signa you can give your design its own unique rhythm. As a visitor approaches the building, different details will draw the attention every time. In this way, your design receives its very own ... Signa-ture.





# MILLIONS OF POSSIBILITIES

On the basis of **four variables** millions of patterns are conceivable.





### **COLOUR**

You choose and combine from the full Vandersanden line. We offer you a range of more than one hundred colours, expanded by the four surface textures: hand-moulded, formback, water-struck and aged.

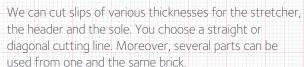
### RELIEF











You do not have to limit yourself to just a single cutting line. By combining several cutting lines you create an intense composition with a varying relief that is full of character.

### **FORMAT**

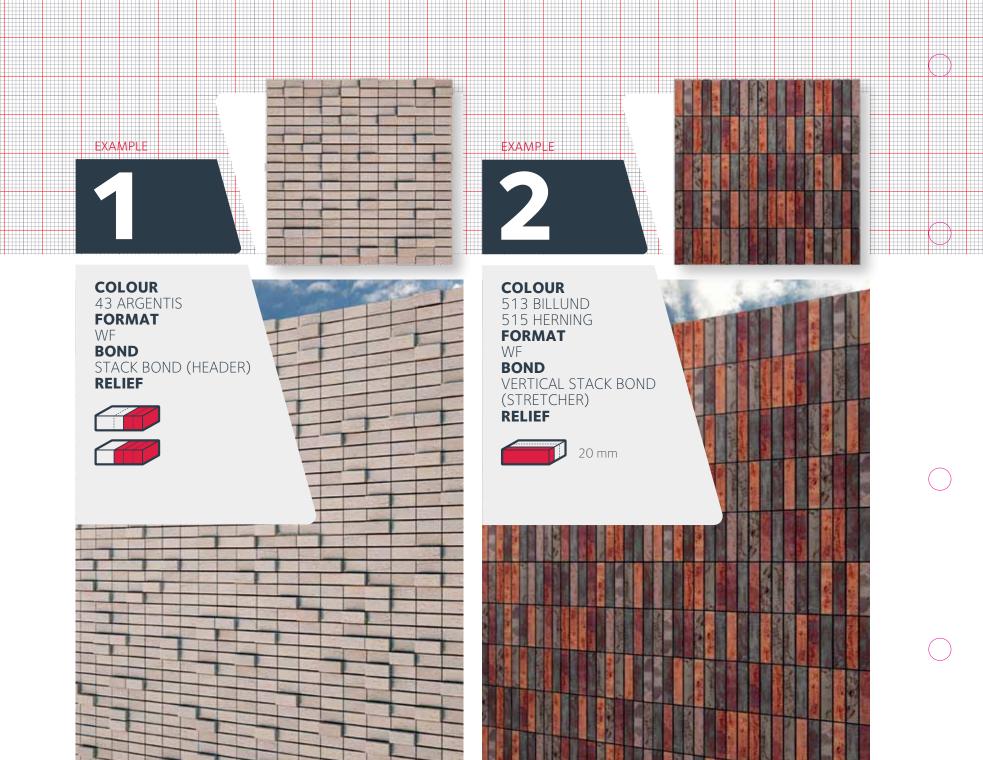
As a basis you can use the stretcher, header and slip of five Vandersanden brick formats:

 $M50 \pm 190 \times 90 \times 50 \text{ mm}$ ± 210 x 100 x 50 mm M65 ± 190 x 90 x 65 mm ± 210 x 100 x 65 mm NF ± 240 x 115 x 70 mm



### BOND

You can apply the familiar brickwork bonds such as half-brick, English bond or irregular bond. Combinations of these brickwork bonds are achievable. Horizontal, vertical and even diagonal brick sections are amongst the possibilities. This is feasible because Signa is not laid but adhesively bonded, thus offering greater freedom.



EXAMPLE 3



EXAMPLE





30 mm







### **MOUNTING**

The ready-to-use Signa panel can be mounted in several ways.

Fastening of the Signa panels screwed or adhesively bonded onto a framework of aluminium or wood. This framework can be mounted on various substrates.







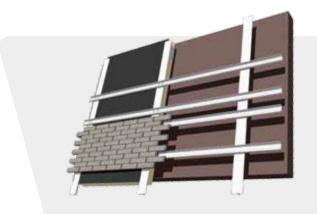
#### **ALUMINIUM SUPPORT STRUCTURE**

The posts of the aluminium support structure are mounted against the bearing wall. In new construction this the inner cavity wall, in renovations the existing facade. After installation of, preferably black coated, insulation between the vertical aluminium T-profiles, horizontal C-profiles are mounted. Specialised installation companies then fasten the Signa panels with aluminium plate hooks.

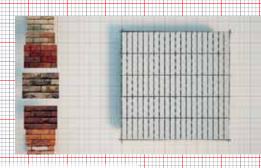
#### **WOODEN SUPPORT STRUCTURE**

The water-resistant spar work of a wooden support structure is built up in the same way as an aluminium support structure. The vertical posts are anchored to the rough structure with distance bolts so that insulation can be applied. Vertical laths at the level of the framework keep black vapour-permeable foil in its place.

With both installation systems, the individual mounting of fitting pieces ensures that the separate Signa panels harmoniously merge into a single whole.



### ADVANTAGES OF SIGNA



### FOR YOU AS AN ARCHITECT

**YOU CREATE** an intriguing field of tension between far off and close by: a captivating overall picture with **striking details** where different patterns define the rhythm.

YOU CREATE your own brick composition with relief, colour, format, brickwork bonds, combinations and repetition of patterns

YOU CAN EASILY PROVIDE for large insulation thicknesses without having to sacrifice cavity ventilation.

YOU HAVE a structural system that makes a brick finishing possible where earlier this was not always feasible, e.g. with large corbels.







## FOR THE CONTRACTOR

HE GOES TO WORK with a simple, tried and tested mounting system of form-retaining materials.

## HE HAS A BETTER CONTROL over the amount of time required thanks to the favourable construction speed.



## FOR THE PRINCIPAL

HE ENJOYS a durable and maintenancefriendly facade that's custom-tailored to his building.

HE MAKES a future-oriented choice thanks to a building system that can be disassembled, replaced and recycled.

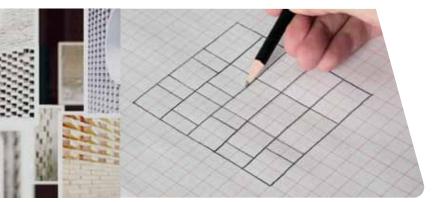
**HE ENRICHES THE LANDSCAPE** with a **distinctive** and unique building.

# FROM DESIGN TO IMPLEMENTATION

We discuss with you the possibilities of the designed composition and work out a three-dimensional visualisation of the panel.



You work out a unique pattern of brick slips.



The mounting method is determined.

The facade plan is fully elaborated in detail.



After approval, the Signa panels go into production.

The Vandersanden Group transports the panels safely and punctually to the work site.



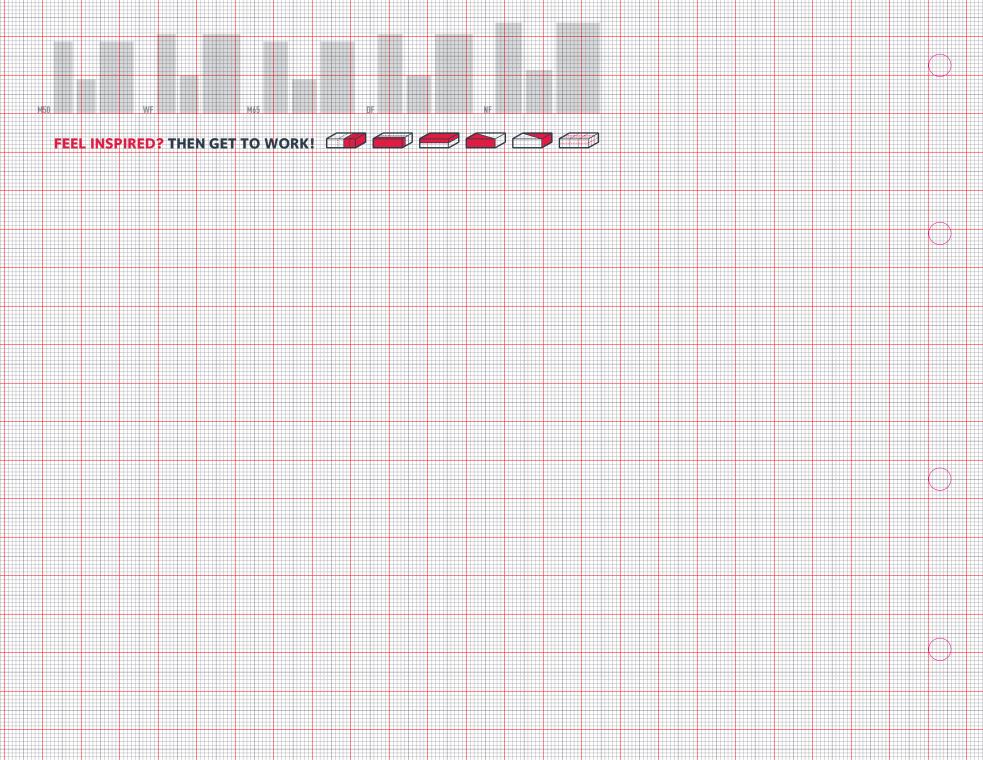
TAKE A LOOK AT THE FILM ON WWW.signapanels.be



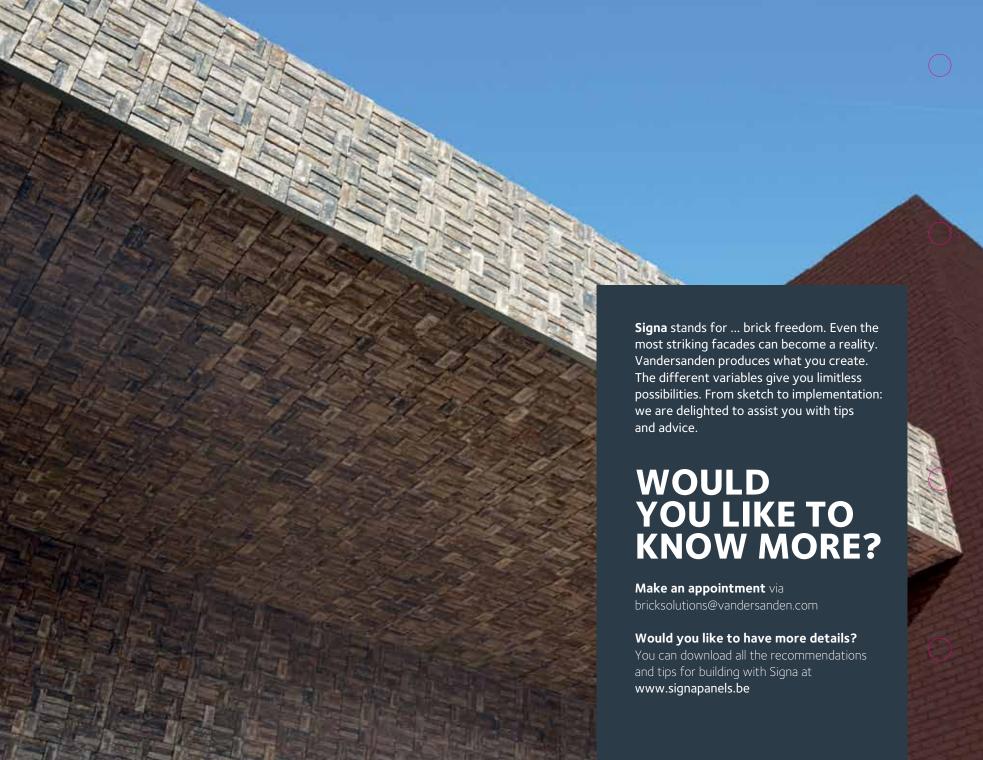
A specialised installation company fastens the Signa panels at the building site.

With Signa, you're opting for a comprehensive service from design to implementation.

Are there any questions during or after this process? Our specialists are there to assist you with advice and action. bricksolutions@vandersanden.com | Tel.: +32 (0)89 51 01 40







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