



RETHINKING
THE FACADE

DESIGN. INSTALLATION. PERFECTION.



WELL THOUGHT OUT FROM START TO FINISH

A changing world needs solutions that can lead the way. What is state-of-the-art today may be considered outdated tomorrow. This is particularly relevant in the field of sustainable, environmentally friendly construction. As new performance requirements are required they can be difficult to reconcile: **a system should be durable** and easy to install, **heat insulating** and simultaneously **flame retardant**, **space saving** and **stable**. And of course it also needs to look good.

System kess meets all these requirements. We work with PUR. This enables us to achieve 20 % better insulation values than EPS (expanded polystyrene) or rock wool.

A brick facade made with *System kess* looks good and offers lasting protection and safety.

System kess has low flammability without fire bars or additional fire protection. That saves money and materials.

Whether new build or renovation, *System kess* is the flexible solution that can bring architects' and developers' dreams to life.

And this thermal insulation composite system also makes an important contribution to climate protection.

STRONG AND LIGHT – ADVANTAGES BY DESIGN

The *System kess* interlocking elements combine the advantages of easier installation with the brick slips' greater adhesive tensile strength compared to glued versions.

System kess also requires approx. 15 kg less adhesive per m² than conventional reinforced glued systems.

The coordinated elements are easier to handle, and optimal use is made of the material – there is very little waste. So *System kess* sets new standards for sustainable building.



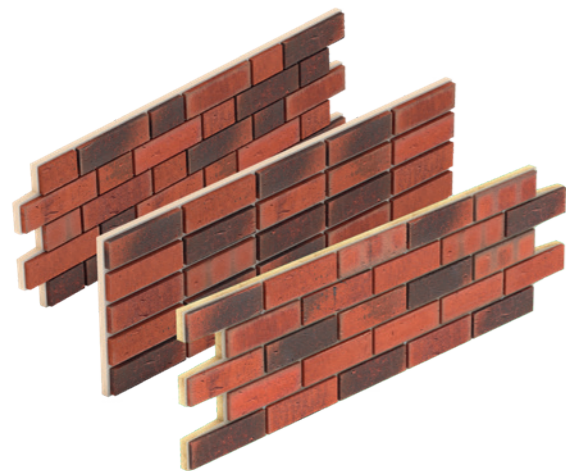
DESIGN AND HANDLING

Simple and flexible – form follows function

System kess proves its effectiveness not only on the flat surface of the facade but critically on those visually prominent parts of the building that shape its appearance and mark the architectural style: **corners, columns and window openings.**

Every detail of *System kess* has been consistently thought out to the end.

The sum of its advantages results in a system that sets new standards in the market.



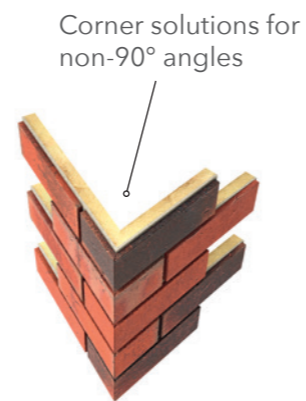
Wall elements

Use the wall elements from *System kess* to create an attractive facade design with the thermal insulation values expected today. The wall elements are mechanically fastened with screws.



House corners

System kess ensures a seamless continuation of the bond and interlock pattern with special House corner elements that blend in harmoniously with the chosen bond.



Naturally, you can enjoy the benefits of *System kess* with acute or obtuse angles, too. There are no limits to creativity.



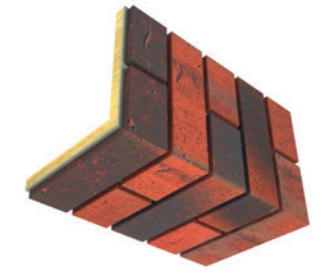
Window corners

Windows are the 'eyes' of a building. *System kess* solutions for stylistically correct brick cladding are as diverse as the architectural variations are.



U-shaped and column elements

When it comes to facade segmentations – columns and pillars – *System kess* can demonstrate its benefits to the full.



Lintel elements

This is especially true for window lintels. *System kess* lintel elements are prefabricated ex works. This guarantees quality and efficient installation.

Enduring tradition lives on in the detail!

VARIOUS BRICKWORK BONDS

Brick facades - variety in the bond

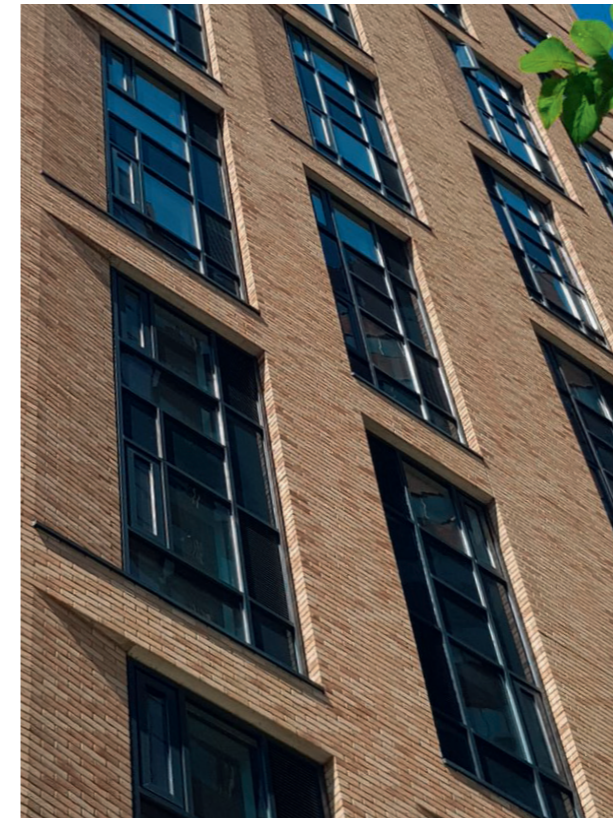
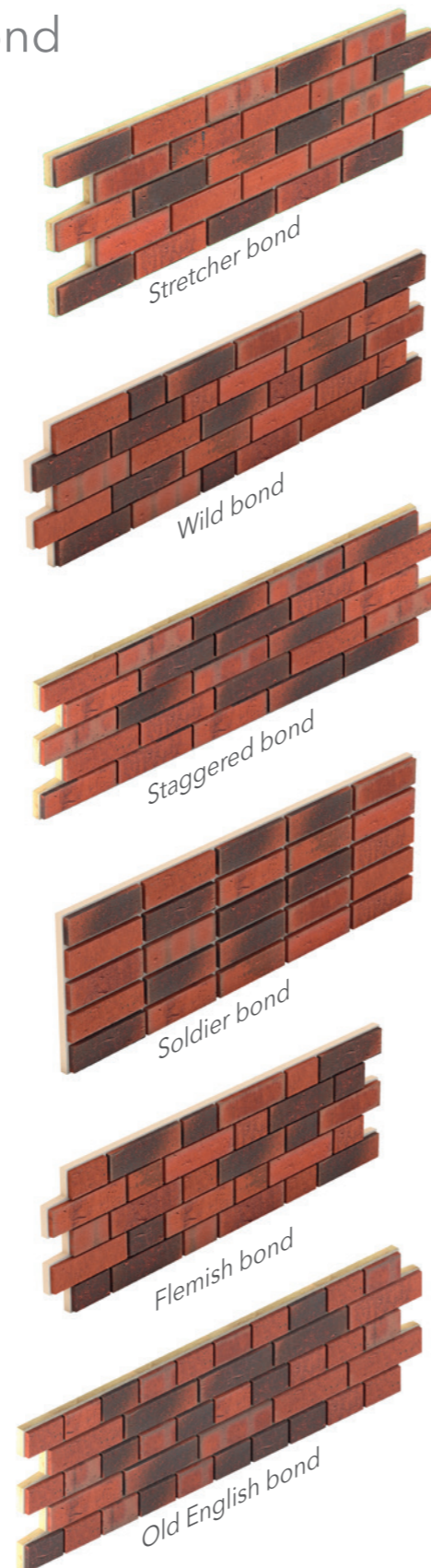
The wealth of shapes and colours of traditional brick facades still characterises the appearance of many famous cities today. With **System kess**, this richness can be carried into the 21st century.

All the system components are available in different brickwork bonds: house corners, lintels and window reveals are prefabricated to size. This saves time on the building site - and it saves money, both in new builds and renovations.

The result blends harmoniously into the general setting - or sets tasteful accents in a diverse environment.



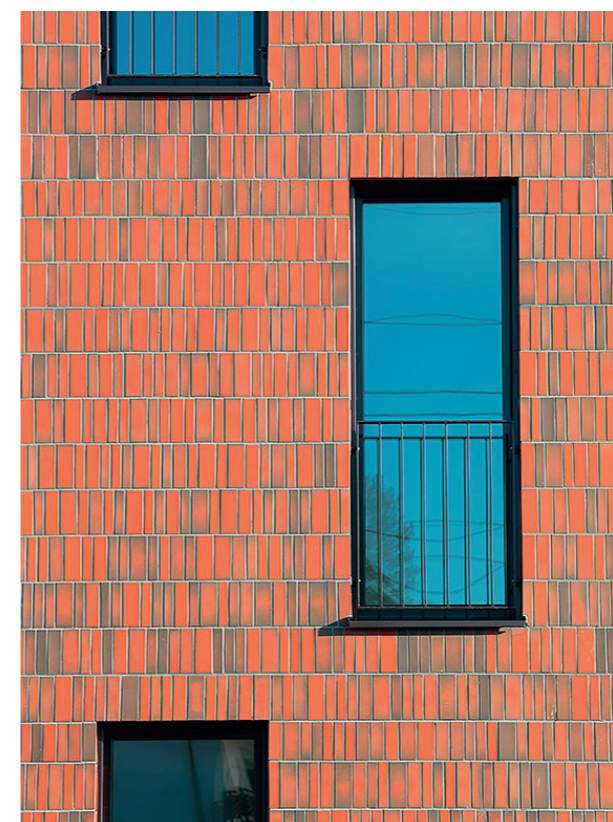
You will find the infinite variety of possibilities in our brochure "The Colours of **System kess**". Is that something you're interested in? We will be happy to send you a copy.



The simple, clear structure of the stretcher bond underlines the outstanding architecture.



The wild brickwork bond is popular because its timeless look suits many different architectural styles.



A red brick facade in the soldier bond. Here, the bricks were set on edge.



Dark red bricks in Flemish bond

HOUSE CORNERS

Harmonious in every detail

Modern architecture appeals through unconventional shapes and colours. Creativity and style are decisive. **System kess** you can create the desired accents in no time at all. House corners can be produced for any desired bond pattern:

- Stretcher bond
- Wild bond
- Staggered bond
- Soldier bond
- Flemish bond
- Old English bond

Bricks of all sizes, colours and surfaces can be combined in any brickwork bonds,

guaranteeing quality and efficient installation for the entire project.



Special solutions beyond the right angle

Flexibility is key

System kess consistently supports the architectural dialogue with the surroundings, whether in the design of visual axes or the optimal utilisation of the plot.

There are many reasons for moving away from right angles in a building. The customised corner elements from **System kess** ensure that there are no time-consuming delays on the construction site.



Example: 72° angle



Example: 108° angle

House corner examples with normal format (NF) in stretcher bond



3-brick interlock 2-brick interlock
1.5 bricks 1.5 bricks



3-brick interlock 3-brick interlock
1.5 bricks 2 bricks



2-brick interlock 3-brick interlock
2 bricks 2 bricks



WINDOW CORNERS

System Kess window corner elements are available in different reveal depths. The depth of the window elements (reveal) depends on the thickness of the insulation and the position of the window.

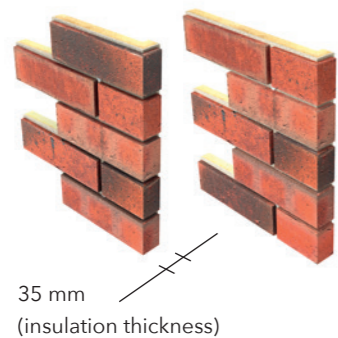
The window corners have an open interlock towards the facade's flat surface so that they can be easily connected to the other panels - the ideal solution for quick and easy installation.

The side open to the flat surface of the facade is always one-and-a-half bricks wide. Special lengths are produced on request.

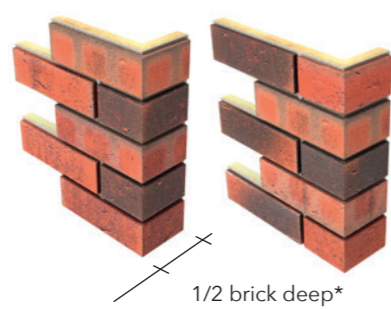


Window corners in different depths

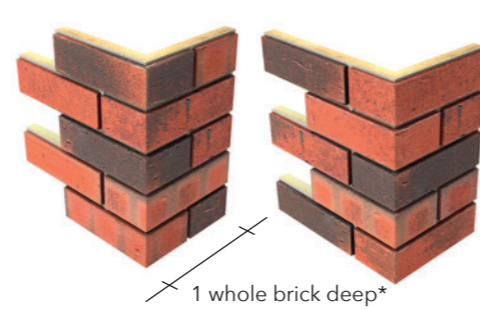
Type FE 1



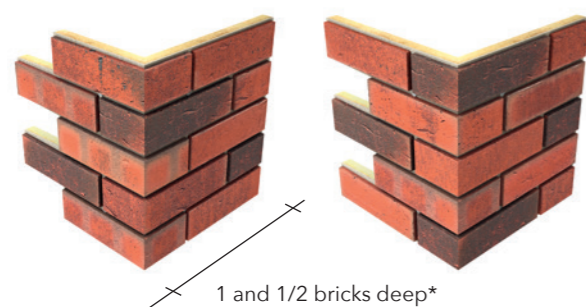
Type FE 2



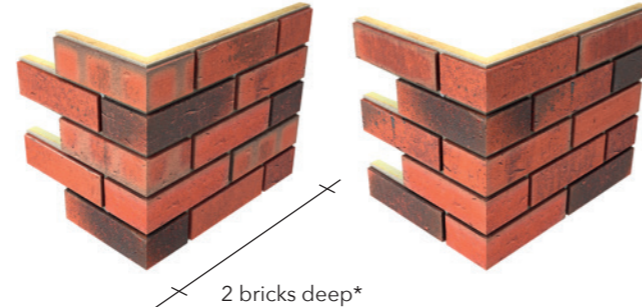
Type FE 3



Type FE 4



Type FE 5

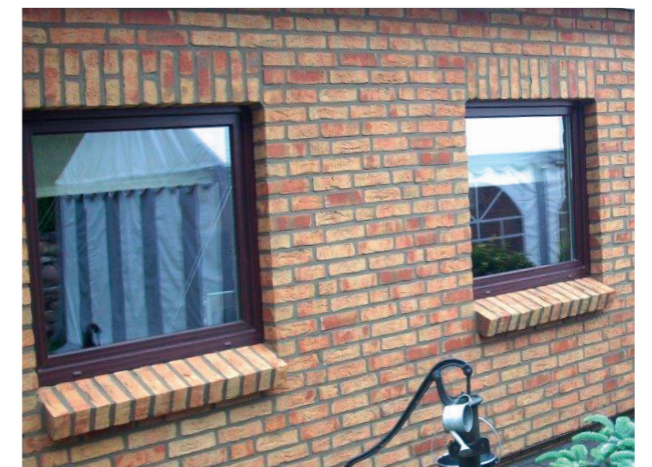


* The dimensions of the elements depend on the dimensions of the brick formats used.

LINTEL ELEMENTS

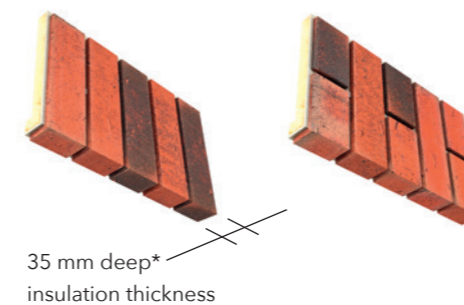
System Kess lintel elements prefabricated in soldier and stretcher bond ex works.

Please contact us for regional specialities or individual designs/wishes. Everything is possible.

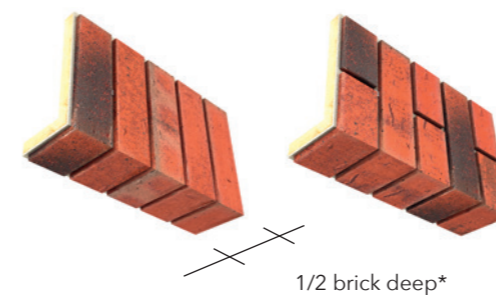


Above: lintel element above the windows in soldier bond; below: lintel elements in stretcher bond

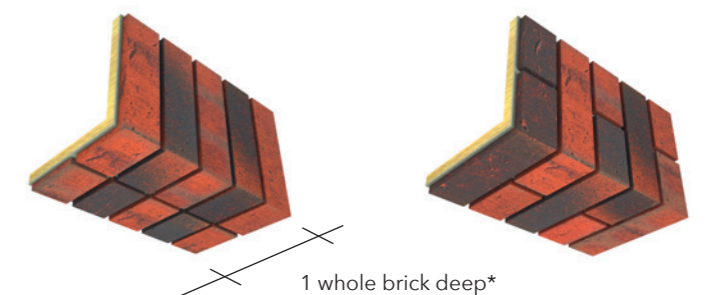
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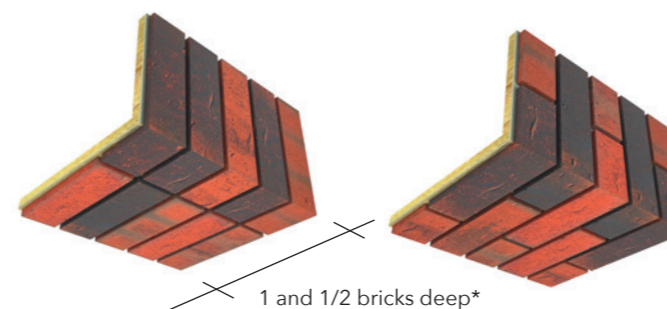
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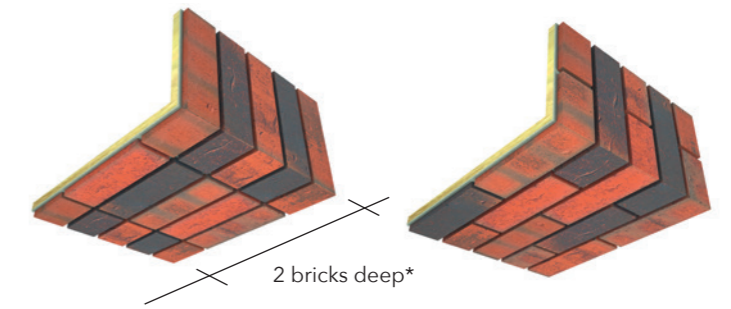
Type ST 3



Type ST 4



Type ST 5



* The dimensions of the elements depend on the dimensions of the brick formats used.

SYSTEM SOLUTIONS FOR WINDOWS

Architectural features

Not all windows are the same

Reveals often create special architectural accents. Produced in different depths, they can be plastered or faced with metal, they can open out at oblique angles or contain decorative elements.

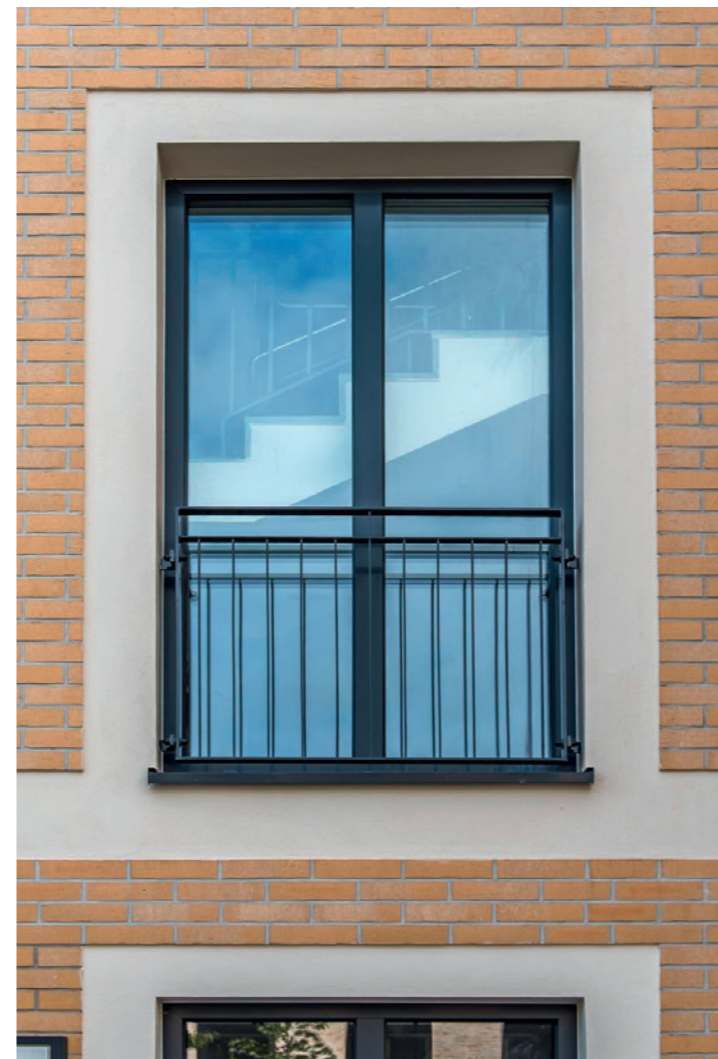
In all of these cases, *System kess* has the right solution ready to ensure the stability and appearance of the chosen bond.



Catch the light - *System kess* also has solutions for sloping window reveals.



Protruding, plastered window reveals contrast beautifully with the brick facade.



Plastered window reveals



Protruding aluminium window frame



Left: flush aluminium frame

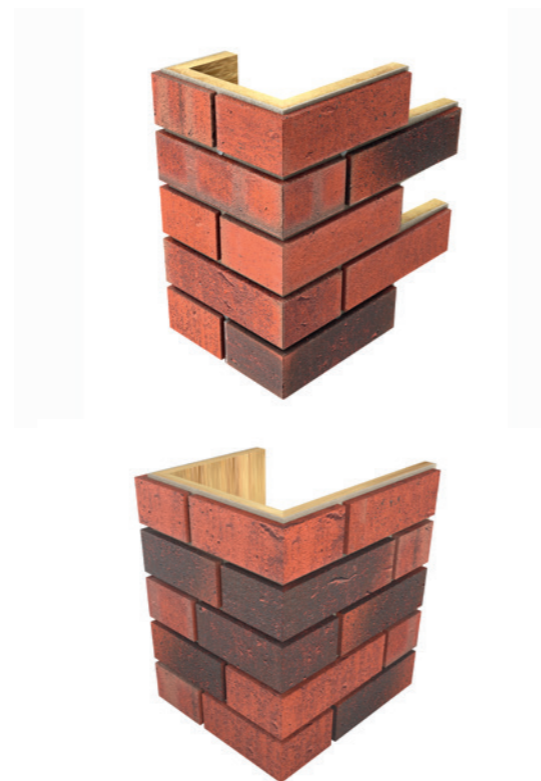
COLUMNS AND HALF-COLUMNS

U-shaped elements

Columns and half-columns can be easily integrated into the masonry bond using prefabricated U-shaped elements with or without interlock.

Columns can be used in a wide variety of ways, whether as functional or decorative elements.

Columns and half-columns are important style elements. They determine a building's character and presence.

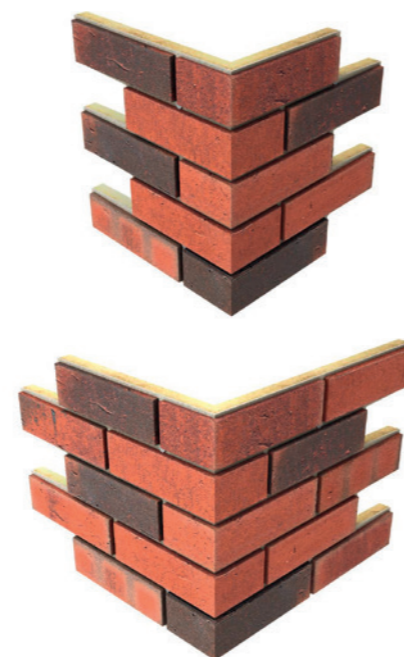


Column or U-shaped elements are prefabricated with or without interlocking, as required.

Two corners as a U-shape

System kess also offers the possibility of pushing two corners with matching interlocking together to form a U-shape.

This creates new opportunities to adjust the length and depth of the sides and gives you maximum flexibility when it comes to the width of a U-shape.



Another option for cladding columns or pillars: two corner elements



Wild bond with grey bricks on an office/residential building with a half column



U-shaped elements are also a speedy and effective cladding solution when windows are close together.

DISTINCTIVE BEAUTY WITH EXCELLENT FIRE PROTECTION

Brick formats

The visual quality of a brick facade stands and falls with the quality of the bricks used. **System kess** uses traditionally fired bricks slips in all common formats. They can be produced in thicknesses from 14 to 22 mm. The standard thickness is 14 mm. Other sizes and formats are possible.

The surfaces can be smooth, grained, sanded or glazed. All sizes, colours and surfaces can be combined with any brickwork bonds.



Contemporary or traditional style - with **System kess** there are no limits to what you can do.



Resistant, with excellent fire protection

System kess wall elements are manufactured with PUR/PIR rigid foam. By interlocking the elements, we obtain excellent brick stability while also saving an enormous amount of weight compared to conventional gluing systems.

In addition, the material is highly resistant to fire and is biologically and ecologically safe.

Even time barely alters it. PUR/PIR rigid foam is mould and rot resistant. A **System**

kess brick facade continues to embellish and protect for years with no further maintenance costs.

Thermal insulation with System kess

It is impossible to talk about thermal insulation without talking about characteristic values.

As the U and R values show, even the wall element without additional thermal insulation bears comparison with rock wool. Combined with thermal insulation boards of different thicknesses, the effect can be increased as desired. This saves energy and thus CO₂ emissions.

R-value = thermal resistance;
U-value = heat transfer coefficient

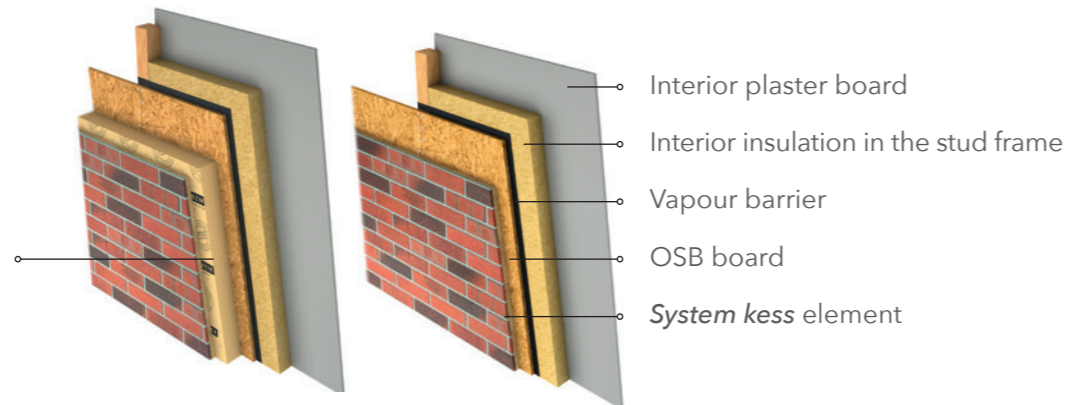
System thickness	System kess with additional PUR insulation		System kess 3.5 cm with additional rock wool insulation
	U-value*	R-value*	R-value*
3.5 cm	1.146	0.87	0.87
5.5 cm	0.630	1.59	1.37
7.5 cm	0.435	2.30	1.87
9.5 cm	0.332	3.02	2.37
11.5 cm	0.253	3.95	2.87
13.5 cm	0.212	4.72	3.37
15.5 cm	0.176	5.67	3.87
17.5 cm	0.154	6.47	4.37
19.5 cm	0.137	7.27	4.87
21.5 cm	0.124	8.07	5.37
23.5 cm	0.113	8.87	5.87

* rounded to 2 or 3 decimal places

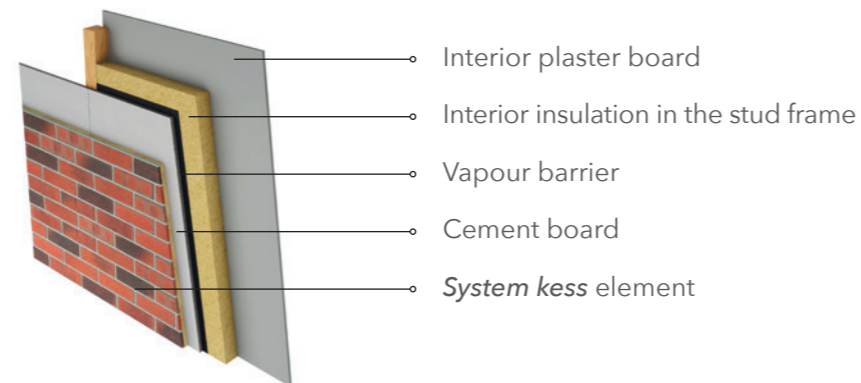
CONSTRUCTION ON DIFFERENT SUBSTRATES

Timber frame with and without additional PUR insulation

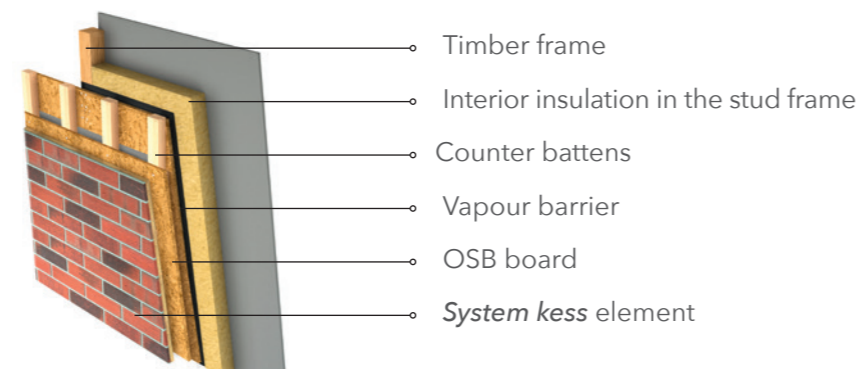
Additional PUR insulation



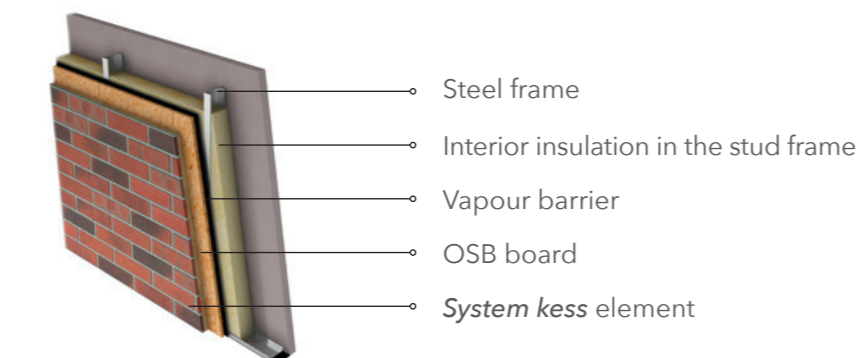
Timber frame on cement board



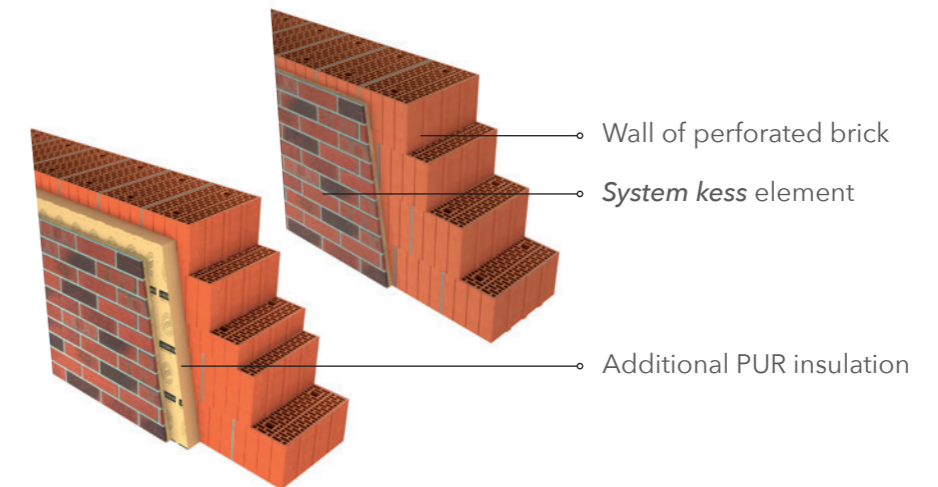
Timber frame with counter battens



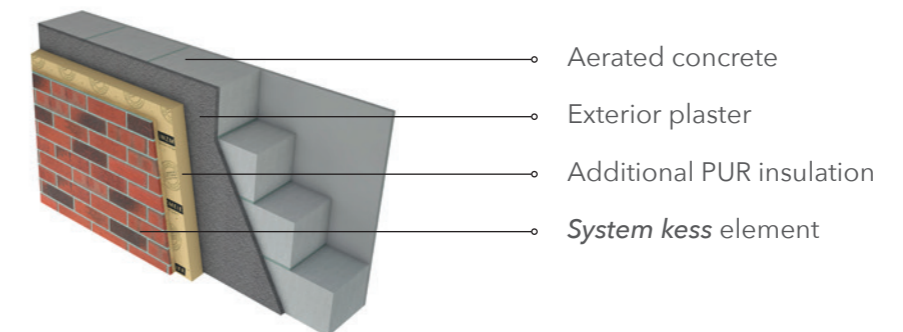
Steel frame



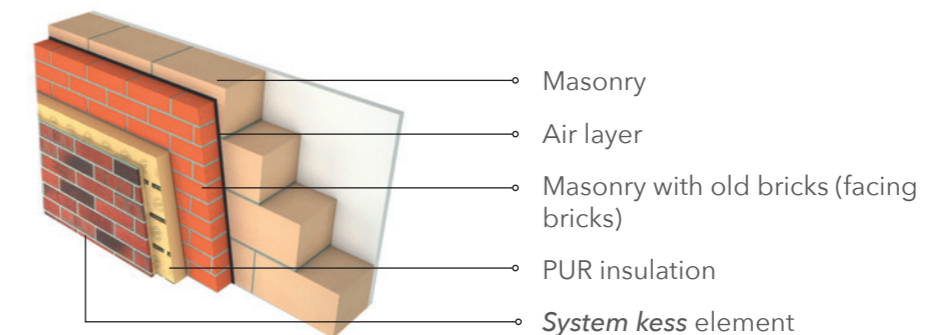
Vertically perforated brick with and without additional PUR insulation



Plaster facade



Old brickwork



- All System kess cladding systems are possible with and without additional PUR insulation.
- The illustrations are examples.
- If you have any questions about technical details or connection solutions, please contact us on: info@kess-clinker.de

QUICK AND EASY INSTALLATION

The case for System kess

Overview of the benefits

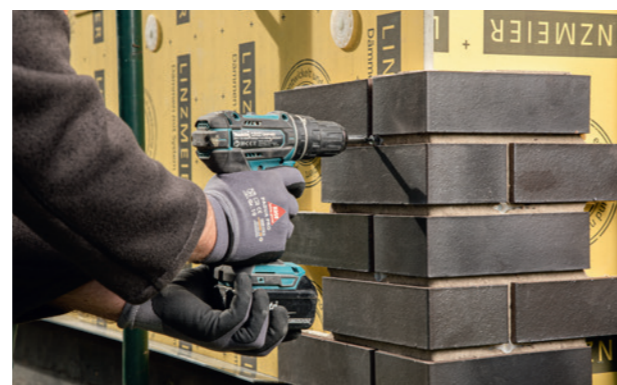
- Easy assembly
- Mechanically fastened with screws
- Easier to plan timings
- Installation independent of weather conditions
- Lower scaffolding costs
- No mineral adhesive required
- No gluing of individual slips, no fabric, no problems with adhesion due to mineral glue
- Weight savings for the facade (approx. 15 kg/m² depending on the design)
- Reliable protection and high stability
- No additional fire protection required
- Brick slips can be individually selected
- Great adaptability of individual elements to the architecture
- Insulation thickness can be added individually to *System kess* 3.5 cm



Step 1: Setting the starter rail (optional)



Step 2: Attaching the insulation



Step 3: Attaching the house corner (gluing and screwing)



Step 4: Applying foam to the elements



Step 5: Easy attachment of *System kess* panel



Step 6: Drilling for fixings; setting suitable plugs and screws



Step 7: Fastening the elements



Step 8: Grouting the brick facade

THOUGHT OUT IN EVERY DETAIL



System kess sets new standards

Securely interlocking elements, easy installation and efficient thermal insulation – these are just the most important benefits of brick cladding with **System kess**. If you love traditional brick facades but also consider climate-friendly energy saving to be indispensable, you won't want to miss the flexible solutions of **System kess**.

Whether the task in hand is an energy-efficient renovation of an old building or the future-oriented construction of new buildings, **System kess** is the ideal solution for

every project that places the same value on quality as on cost efficiency.

With a weight of 28 to 35 kg per m², the facade elements are so light that there are practically no limits to their safe use.

One big advantage is that you do not need a foundation for **System kess**.

Excellent fire protection

Because of its exceptional adhesive tensile strength, **System kess** is the preferred ETICS for many building owners and public developers – safety is their main concern in today's world.

The adhesive tensile strength of **System kess** brick slips is several times greater than that of individually bonded stone-wool or polystyrene elements. The combination of solid manufacturing and high-quality materials also reduces the risk of fire spreading.

For environmental and fire-protection reasons, we use polyurethane rather than polystyrene. Polyurethane has a low flammability and complies with fire protection class EUROCLASS B-s1, d0*.

Easy

System kess is quick and easy to install. The wall elements are 3.5 cm thick including brick slips and can be individually supplemented with PUR insulation boards. This makes **System kess** 10 to 15 kg lighter per m² than comparable ETICS – giving a total of approx. 2.3 tonnes less weight on the exterior wall for an average family house.

An insulating brick facade from **System kess** does not require a difficult-to-lay foundation and does not use a mineral adhesive that first has to be mixed on site. This means that installation is not dependent on the weather.

Installation is made even easier by the system of interlocking the individual elements. Mistakes in the finish are practically impossible.

Beautiful

Only high-quality brick slips made of pure clay are used for the **System kess** external thermal insulation composite system. Unlike conventional ETICS, brick facades built with **System kess** form a solid unit with the substrate, making them extremely durable.

Our brick slips are available in many attractive colours and come in different sizes and brickwork bonds. This gives you almost unlimited creative possibilities for your facade design.

Warm

Warm, cosy rooms – who doesn't want that? By insulating your building with **System kess** insulating bricks, you can save up to 40% on energy costs.

The surface remains breathable, ensuring enough air exchange to avoid moisture and mould.

* B: very limited contribution to fire
s1: very limited amount of smoke developed
d0: no burning droplets or particles within 600 seconds



System **KESS**

Easy • Beautiful • Warm

Easy Installation • Beautiful Brick Facades • Warm Living Environment

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