

Timeless. Durable. Energy efficient.

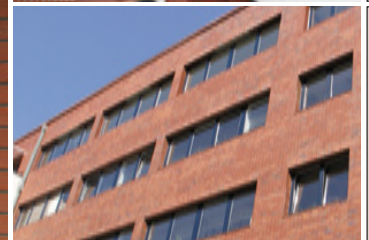
Façades

Strong in refurbishment and renovation

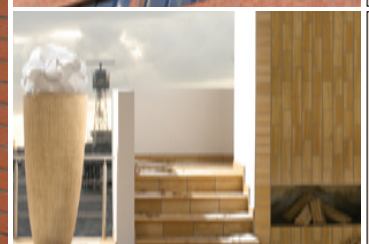
Perfect in
surface, colour-
and size-variety



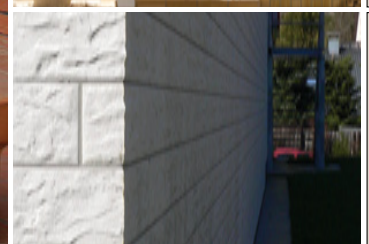
Keraprotect®



Keravette®



Faccia















Kerabig®



Keraprotect®

Strong in refurbishment and renovation



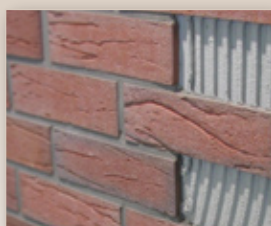
-  Suitable for insulation systems
-  Completely frost-resistant 25 year guarantee
-  Weatherproof
-  Easy maintenance and hygienic
-  Glow and fireproof
-  Fade-free and colourfast
-  Environmentally friendly
-  Anti-static
-  Variety of colours and accessories
-  DIN EN ISO
In compliance with DIN EN
-  Resistant to chemicals
-  Tunnel kiln fired

The revolutionary clinker tile generation for a lasting impression



As rough and grainy as sharkskin is the feel of this classic "Dutch" tile to the touch. The unusual yet appealing clinker-look is not the only advantage this sturdy ceramic with the special tunnel kiln quality has to offer. Whether a new development or the renovation of an older structure, the same questions arise again and again: Is heat being lost too quickly to the outside? Is noise entering the building too easily? For noise can be as annoying as the unavoidable costs of material and equipment that come with the regular re-painting of a plaster façade. Keraprotect® offers you true protection against all of these.

What are real facing bricks?



Real facing bricks are modern, long-lasting weatherproof building materials made of fired clay. Significantly thinner than tiles, they can even be used where normal tiles and facings cannot be used. Brick veneers are not fixed with mortar, but simply attached to the existing surface or wall. Particularly in the renovation of older buildings, detached houses or high-rise buildings, and above all in

combination with energy-saving external thermal insulation composite systems, they have proven to be both visually appealing and economic. Whether for classic, modern or rustic façades – the large solution of STRÖHER facing bricks has the right veneer for every building style.

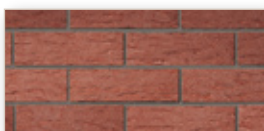


Keraprotect®

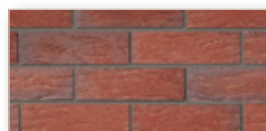
Keravette®

Faccia

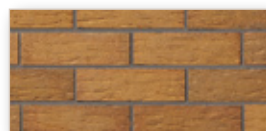
Kerabig®



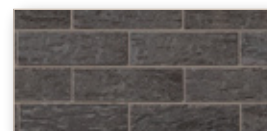
415 breda



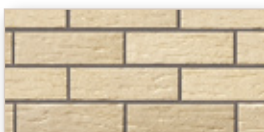
416 rotterdam



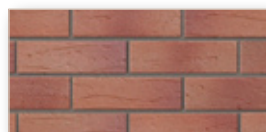
405 amsterdam



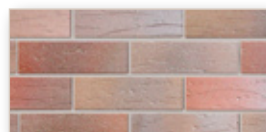
430 den haag



410 groningen



413 utrecht



417 eindhoven



Excerpt from the current building damage report of the federal government

32 facing bricks façades

Maintenance costs (in %)

Reference: New construction of building elements
Period: 80 years
Source: Building damage report of the federal government

Over a period of 80 years the costs of repair work for a plastered façade amount to the equivalent of 130% of the costs of new building. For painting the costs of maintenance mount up to 1120%. In comparison a facing brick façade is unbeatably convenient: only 30% of renovation costs are spent on repairing joints and the ceramic material accounts for a mere 2%.

130 plastered façades










1120 painted façades

* STRÖHER is the only German manufacturer offering a 25-year frost resistance guarantee on the following extruded products that have been correctly installed by a qualified professional tiler: Keraplatte® Aera, Keraplatte® Roccia, Keraplatte® Faccia, Keraplatte® Sasso, Keraplatte® Terra, Keraplatte® Duro, Keraplatte® Combi, Keravette® und Keraprotect®. Please find further explanations in our general terms and conditions.

Keravette®

Strong in refurbishment and renovation



-  Suitable for insulation systems
-  Complete frost-resistance 25 year guarantee
-  Weatherproof
-  Easy maintenance and hygienic
-  Glow and fireproof
-  Fade-free and colourfast
-  Environmentally friendly
-  Anti-static
-  Variety of colours and accessories
-  DIN EN ISO
In compliance with DIN EN
-  Resistant to chemicals

Unparalleled variety – unlimited opportunities

How to give a façade a whole new unmistakable and individual look. No wonder the word “façade” has been adopted from the Italian word “faccia” meaning “face”. Seventeen beautiful colour tones, numerous formats and glazed or unglazed surfaces give you a nearly unlimited choice of options. The material thickness of 8 and 11 mm means this classic among clinker tiles is not only light but, thanks to the specially high firing temperature, it is also extremely robust, completely colourfast, proof against weather and fading, and of course comes with a 25-year frost resistance guarantee.



Energy-saving is law



More than 75% of the energy in an average German household is consumed by the heating system. Whoever wants to save energy and costs must ensure that their façade is efficiently insulated. Through the German energy-saving ordinance (EnEV) energy-saving has become law. All new buildings must be constructed in compliance with the low-

energy standards and even existing buildings have to be insulated more efficiently than before. To ensure compliance the State is offering attractive grants to developers and homeowners. An overview of the more than 4900 grant programmes available can be found at www.baumitbayosan.com.



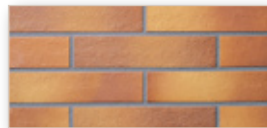
Keravette® unglazed



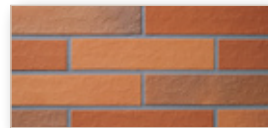
330 graphit



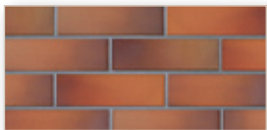
215 patrician red



307 wheat



316 patrician red flashed



318 palace



200 saumon



140 white



230 grey



210 brown



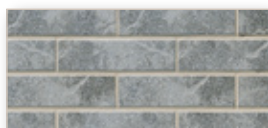
320 sand yellow



Keravette® glazed



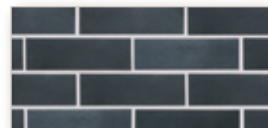
834 giallo



840 grigio



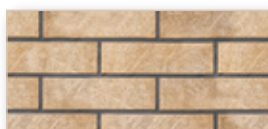
837 marmos



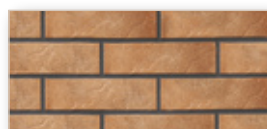
319 royal¹⁾



841 rosso



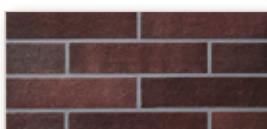
835 sandos



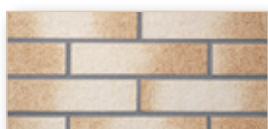
839 ferro



803 elba¹⁾



825 sherry¹⁾



850 garda¹⁾

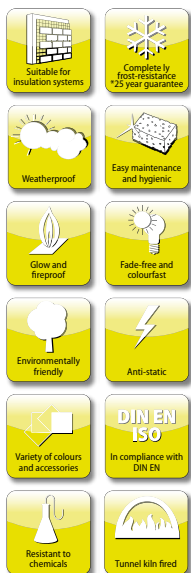
¹⁾ = DIN EN 14411, Gr. All_{a-Part1} WA 3 ≤ 6 %

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Keraprotect®
Keravette®
Faccia
Kerabig®

Faccia

Strong in refurbishment and renovation

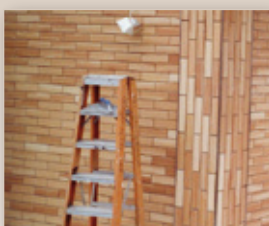


Unglazed and unmistakable – on floors and on walls



Each tile is an individual. Thanks to innovative colour technology, the classic split tile now shows a second and very individual face. On the floor and when used as wall facing tiles. A new method of mixing the clay makes possible a range of colour for unglazed extruded ceramics which is truly unique. And the quality features of this expressive range of tiles are also unique due to special firing in the tunnel kiln. For the firing skin of the fluu-body-coloured tile does not need to be roughened and damaged for further colouring. The abrasion-resistant surface remains intact. An innovation: frostproof, anti-slip and indestructibly individual - no colour gradient resembles the other.

The energy certificate is coming!



The European directive on the energy performance of buildings requires that as of January 2006 an energy certificate must be submitted when the tenant or owner of an existing building changes. This will make not only the heating and hot water costs transparent but also the energy status of the building structure, allowing tenants and owners to

make an informed decision to choose an "energy-saving building". The energy certificate will become a worthwhile incentive for property landlords and sellers to equip buildings with an efficient external thermal insulation composite system.



340 aurea

Keraprotect®

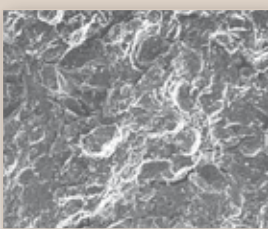
Keravette®

Faccia

Kerabig®



Extruded facing brick: The pore makes all the difference



In 1994, a project by the German Federal Ministry of economics and the Industry Association of ceramic tiles was set up to examine the structural integrity of the External Thermal Insulation Composite System with ceramic coverings as well as its long-term reliability. Included in the findings was the fact that extruded facing bricks are particularly well suited for use as part of the ETICS in respect to the adhesive properties of the thin-bed mortar due to its particular








porous structure. The mercury pressure porosimeter helped to demonstrate this connection clearly. Facing stones manufactured in other ways displayed a low adhesiveness, especially when subjected to frost and subsequent thawing due to their relatively low total porosity.

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Kerabig®

Strong in refurbishment and renovation



-  Suitable for insulation systems
-  STRÖHER hard glaze
-  Weatherproof
-  Easy maintenance and hygienic
-  Glow and fireproof
-  Fade-free and colourfast
-  Environmentally friendly
-  Anti-static
-  Cost efficient
-  DIN EN ISO
In compliance with DIN EN
-  Resistant to chemicals

Perfect natural stone look in an economically large size

Whether full or part cladding, the natural stone look lends façades a particular flair. This robust ceramic with the STRÖHER hard glaze comes in six nature-inspired colours taken from granite, slate, basalt, porphyry and sandstone, and provides long-term protection against the effects of wind and weather yet is still extremely easy to clean. The actual cost of installation is well below that of natural stone and when combined with an excellent insulation system energy maintenance costs are also optimised. The large size format of 15 x 30 cm is an advantage when tiling and a convenient slurry method can be used – for the natural design accent on your façade.

Braving the rain with facing bricks



Driving rain poses a challenge for plaster façades, because the water does not just run down the façade, but is usually pressed into the plaster by the wind. Rainwater can ingress the façade through cracks or inadequate seals.

In particular with multi-storey buildings or buildings with little roof overhang as well as with skirting, the water pressure can increase dispro-

portionately high. Water can gather underneath the plaster, resulting in water or frost damage. Extruded facing stones and extruded insulation panels offer highly effective façade protection due to their product specifications and installation properties.



Keraprotect®

Keravette®

Faccia

Kerabig®



KS 01 white



KS 02 yellow



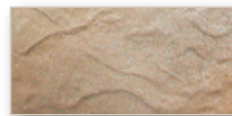
KS 03 rose



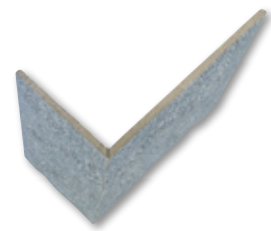
KS 05 anthracite



KS 06 grey



KS 14 brown flashed



Checklist for ETICS with facing bricks

Prerequisites for construction

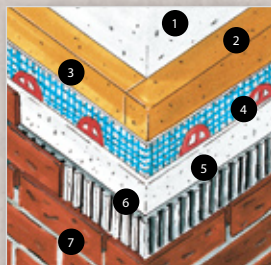
The façade must be stable, clean (no dirt, mould or infestation), sufficiently dry (no building moisture, rising damp or wall damp from the cracks) and straight (in accordance with DIN 18202 (tolerances in building construction)). Dirt and loose elements must be removed, concrete surfaces and coatings must be free of release agents and possibly steam blasted.

- Horizontal coverings such as window sills, roof overhangs, parapet coverings and so on must already be in place when work is to begin.

- Structural movement joints must already be incorporated into the structure. Movement joints must also be placed every 30 metres independently of the aforementioned joints. The width of the joint is in accordance with DIN 18540 - „Sealing of joints in external walls of buildings“

Preparation

- Differences of ± 10 mm can be compensated while cementing (± 20 mm when working on projects that also make use of dowels).
- Any unevenness or hollows in the old plaster of more than 10 mm (or, if appli-



External thermal insulation composite system

1. Old brickwork
2. Insulation material
3. Fibreglass reinforcement
4. Dowel system
5. Undercoat
6. Adhesive
7. Brick veneer



5 good reasons:

1. ETICS saves up to 80% of heating costs

Energy losses through the non-insulated external walls of existing buildings can be noticeably reduced. Together with other energy-saving measures, energy consumption in a house can be halved. Regular price increases in heating oil and gas can be met with equanimity.

2. ETICS increases living comfort

Non-insulated walls have surface temperatures that are too low despite the warmer air in a room. This temperature difference is found to be uncomfortable – even in well-heated rooms.

3. ETICS lowers CO₂ emissions

When a building's energy consumption falls, fewer pollutants are emitted into the atmosphere.

A standard TICS consists of three components

A External Thermal Insulation Composite System (ETICS) fundamentally consists of three main components - the insulation, the reinforcement and the final coating. The concept of ETICS is constantly being developed with regards to comfort of use and safety, especially with facing stone covering materials. This is why neither the size nor the type of the object is important, unless a manufacturer declares otherwise. The work guidelines of each manufacturer must thus not only be read, but also adhered to. Be careful to only use components for cementing, jointing, sealing, reinforcement, edge protection and coating that are approved for usage with facing stones. Otherwise, not only does the guarantee expire, but also the general permission for the construction provided by the building authorities. It is recommended that you read the BFS leaflet No. 21 „Technical guidelines for the planning and implementation of ETICS“ provided by the Federal Committee for Colour and Property Value Protection.

- cable, 20 mm) should be evened out with adhesive mortar or light plaster and left to dry.
- Cover any heavily absorbent grounds with primer-sealer.

Skirting finishes

- Apply a skirting profile suited to the strength of the tiles. If the grounds are uneven, use a profile preparation mortar to guarantee that the lower edge is sealed. Foundation rails should not be pressed in due to the heat strain.
- Foundation rails allow the first insulation panel to be applied easily and fitted independently of the foundations. Use a KompriBAND for thermal decoupling from the aluminium profile.

- For skirting finishes with no profile, use reinforced corner brackets.

Attaching the insulation plates

- Store the insulation plates away from direct sunlight. If the panel has turned yellow, remove the damaged primary layer. Remove dust that is sticking before cementing.
- For grounds that are not absorbent, for example sealed concrete or clinker bricks, special adhesive mortar should be used. The joint mortar and grout should be diffusion compatible.
- The insulation panels intended for the bottom row may have to be trimmed to prevent overlap, for the panels on the building corner, the front sides also have to be trimmed.

4. ETICS increases the value of a building

Buildings with lower energy consumption have a higher market value, both when renting and selling.

5. ETICS prevents mildew forming

Because of the large difference in temperature between non-insulated external walls and the warmer room temperature, condensation can form on internal walls. This gives rise to damp walls that provide favourable conditions for mildew to form.



Keraprotect®

Keravette®

Faccia

Kerabig®

Jointing Guide System: Just insert your ceramic tiles

If screening is cemented onto the insulation and the ceramics are laid properly according to the joints on the underlying plaster with an ordinary ETICS project, the so-called jointing guide system will help to guide the joints automatically, meaning that the ceramics only have to be placed in the appropriately recessed polystyrene panels. Even the screening is no longer necessary, as the recommended thin-bed mortar contains fibres that are intended to prevent tearing of the insulation panels. Another system, the so-called „foam packed“ method, is well established. This is where the ETICS is already coated with facing stones on the factory floor. The ceramic material is laid into forms, like a negative, and the joints are filled with sand. The rear side is then covered with a dual-component foam and then covered with a preparation mortar, placed onto the wall and plugged. The type of jointing is always exclusively dependent on the type of ceramics being used. Slurry jointing materials are used with facing stones with a smooth and non-porous surface. Clinker bricks with a very porous and structured surfaces should be installed with „earth-dry“ jointing mortar and a special tool called „jointing iron“.



- To minimise the risk of cracks, the panels by window corners, door corners, terraces and adjacent to balconies should be filled with silicone sealant. In other words, there must not be any insulating adhesive located in the corners. Embed some reinforcement arrows or a piece of reinforcement fabric cut to size in the reinforcement layer.
- A precompressed adhesive sealant should usually be placed under all windows and on the side between the insulation and window sill, and a reinforced corner bracket cut to size for reinforcing the corners should also be applied to the insulation panels with reinforcement mortar.
- All butt joints should be kept free of mortar to prevent thermal bridges. When working with dowel, it should be fully enclosed, also to prevent thermal bridges.

Ceramic coverings

- Facing stones may be used as ceramic coverings in accordance with DIN 18515-1. They must be frost resistant in accordance with DIN EN 202.
- Individual ceramic coverings must not exceed a surface of 0.09 m² and an edge length of 0.3 m.
- The maximum pore radius must be at least 0.2 µm when considering the frequency distribution of the pore sizes. The pore volume must be 20 mm³/g.
- The water absorption according to DIN EN ISO 10545-3 must not exceed 6.0% when using TT 320 polystyrene insulation panels and 3.0% when using TT 330 mineral fibre insulation panels.


Keraprotect® unglazed

DIN EN 14411, Group AII_{a-Part 1} (previously DIN EN 186_{Part 1})

Format no. Description	 7020 facing brick	 7021 facing brick corner piece
Nominal size (cm)	25 x 8	8
Production size (mm)	240 x 71 x 11	240 x 115 x 71 x 11
415 breda	●	●
416 rotterdam		
405 amsterdam		
410 groningen		
413 utrecht		
417 eindhoven 430 den haag		



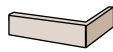
Faccia unglazed

DIN EN 14411, Group AII_{a-Part 1} (previously DIN EN 186_{Part 1})

Format no. Description	 2230 facing brick
Nominal size (cm)	30 x 10
Production size (mm)	292 x 92 x 10
340 aurea	●




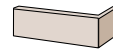
Keravette® unglazed

DIN EN 14411, Group AII_{a-Part 1} (previously DIN EN 186_{Part 1})

Format no. Description	 7960 facing brick with textured surface	 2110 facing brick corner piece	 2640 angle facing brick
Nominal size (cm)	25 x 6	25 x 8	8
Production size (mm)	240 x 52 x 8	240 x 71 x 11	240 x 115 x 71 x 11
330 graphit	●	●	●
215 patrician red			
307 wheat			
316 patrician red fl.			
318 palace 200 saumon 140 white 230 grey 210 brown 320 sand yellow			




Keravette® glazed

DIN EN 14411, Group AII_a (previously DIN EN 121)

Format no. Description	 8071 facing brick with textured surface	 7960 facing brick with textured surface	 2110 facing brick	 2610 angle facing brick
Nominal size (cm)	25 x 8	25 x 6	8	8
Production size (mm)	240 x 71 x 8	240 x 52 x 8	240 x 71 x 11	175 x 71 x 52 x 11
834 giallo 840 grigio 837 marmos 841 rosso 835 sandos 839 ferro	●			
319 royal ¹⁾ 825 sherry ¹⁾ 803 elba ¹⁾ 850 garda ¹⁾		●	●	●

Kerabig® glazed

DIN EN 14411, Group BII_b (previously DIN EN 176)

Format no. Description	 8430 KERABIG	 8431 corner piece	 8432 miter cut corner pair
Nominal size (cm)	31 x 15,5	15,5	15,5
Production size (mm)	302 x 148 x 12	221 x 71 x 148 x 12	221 x 71 x 148 x 12
KS 01 white KS 02 yellow KS 03 rose KS 05 anthracite KS 06 grey KS 14 brown-flashed	●	○	○

Through the special tunnel kiln-fired process, facing bricks such as KERAPROTECT®, KERAVETTE® and FACCIA have always been fired at over 1200° C at STRÖHER. The distinctly higher firing temperature condenses the products significantly, after which water absorption is a maximum of ≤6%. Over the long term a façade with facing bricks is maintenance-free.



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- = normally available ex stock
- = made to order – delivery terms upon request
- ¹⁾ = DIN EN 14411, Group AII_{a-Part 1} WA 3 ≤ 6 %

The formats shown are illustrative drawings and are not binding. All information without guarantee.



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