



StoDeco Facade Elements

Insulated facades featuring
three-dimensional facade ele-
ments

Please note that the details, illustrations, general technical information, and drawings contained in this brochure are only general proposals and details which merely describe the basic functions schematically. They are not dimensionally accurate. The applicator/customer is solely responsible for determining the suitability and completeness of the products used for the respective construction project. Neighbouring works are described only schematically. All specifications and information must be adjusted or agreed in the light of local conditions and do not constitute work, detail or installation plans. The technical specifications and product information included in the Technical Data Sheets and system descriptions/approvals must be observed.

Based on a natural raw material

Perlite forms when the volcanic rock obsidian is exposed to weathering. We use a purely thermal expansion method to turn the raw material perlite into a granular form of Verolith. From this granular material, slab workpieces for the three-dimensional facade elements are produced using pressure and heat.



Typologies and geometries

Verolith workpieces are available as standard in formats with lengths up to 240 cm, widths up to 120 cm, and thicknesses up to 10 cm. Other formats are also available on request.

We then turn these workpieces into sculptural shapes, ledges, and panels in accordance with your precise specifications. The designs mentioned on these two pages, as well as other options, can be found on our website. They will provide you with a starting point for your own designs.

Sculptural shapes, positioned by themselves



FI_DE_01K4NN01



FI_DE_02K4P001



FI_DE_01KRNN01

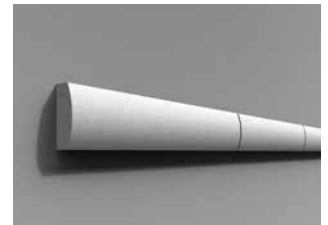
Ledges, positioned in a row



FI_DL_01PLNN01



FI_DL_02PLNN01



FI_DL_01KXNN01

Panels, positioned over an area



FI_DP_01K0NN01



FI_DP_01RNSK01



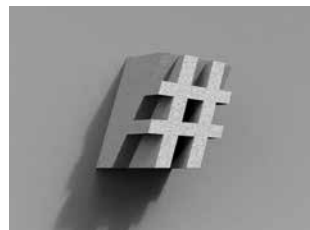
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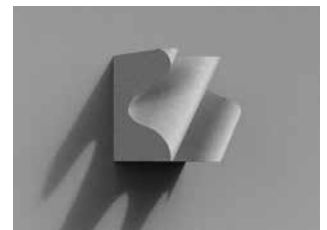
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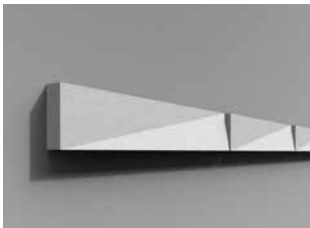
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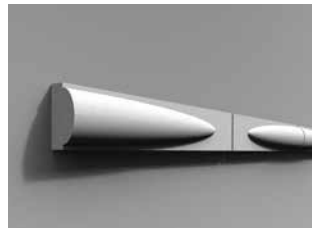
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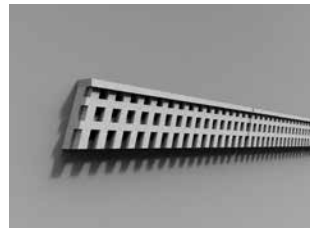
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FI_DL_01KVSK02



FI_DL_02KXNN02



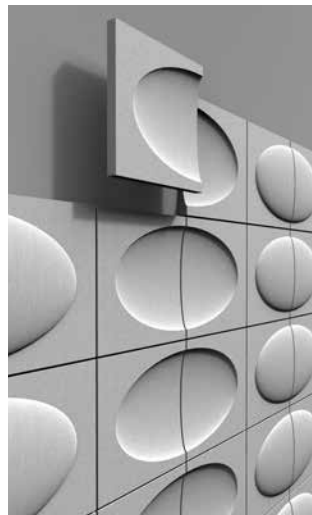
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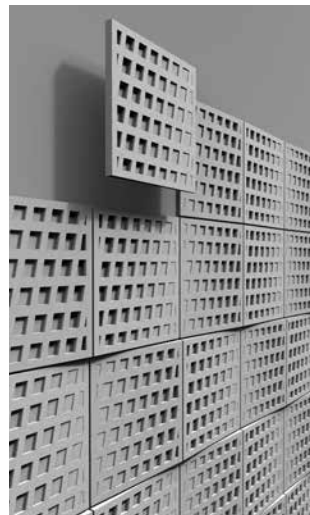
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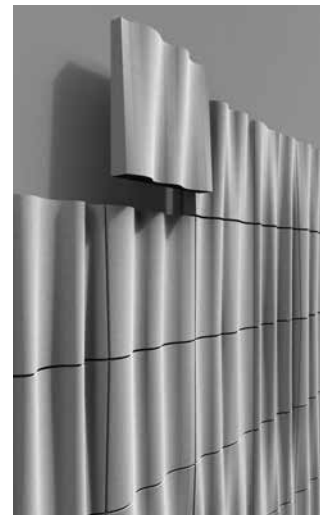
FI_DP_01RNSK02



FI_DP_02KVK001 and FI_DP_02KXW001



FI_DP_01RNEK02



FI_DP_01RNKW02

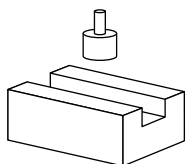
Shaping

A vision for the facade is a source of inspiration for the individual shapes of the Verolith workpieces.

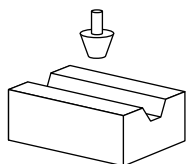
A 5-axis CNC milling machine removes material from the workpieces to produce these shapes. Alternatively, elements with a highly complex design can be created using a casting process.

The finished workpieces are applied to the external wall insulation system in accordance with the planner's specifications, and then coated.

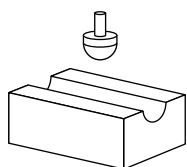
Milling geometries for machining the Verolith workpieces:



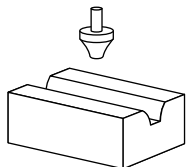
Square milling cutter



Double equal-angle milling cutter

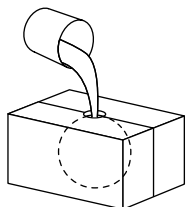


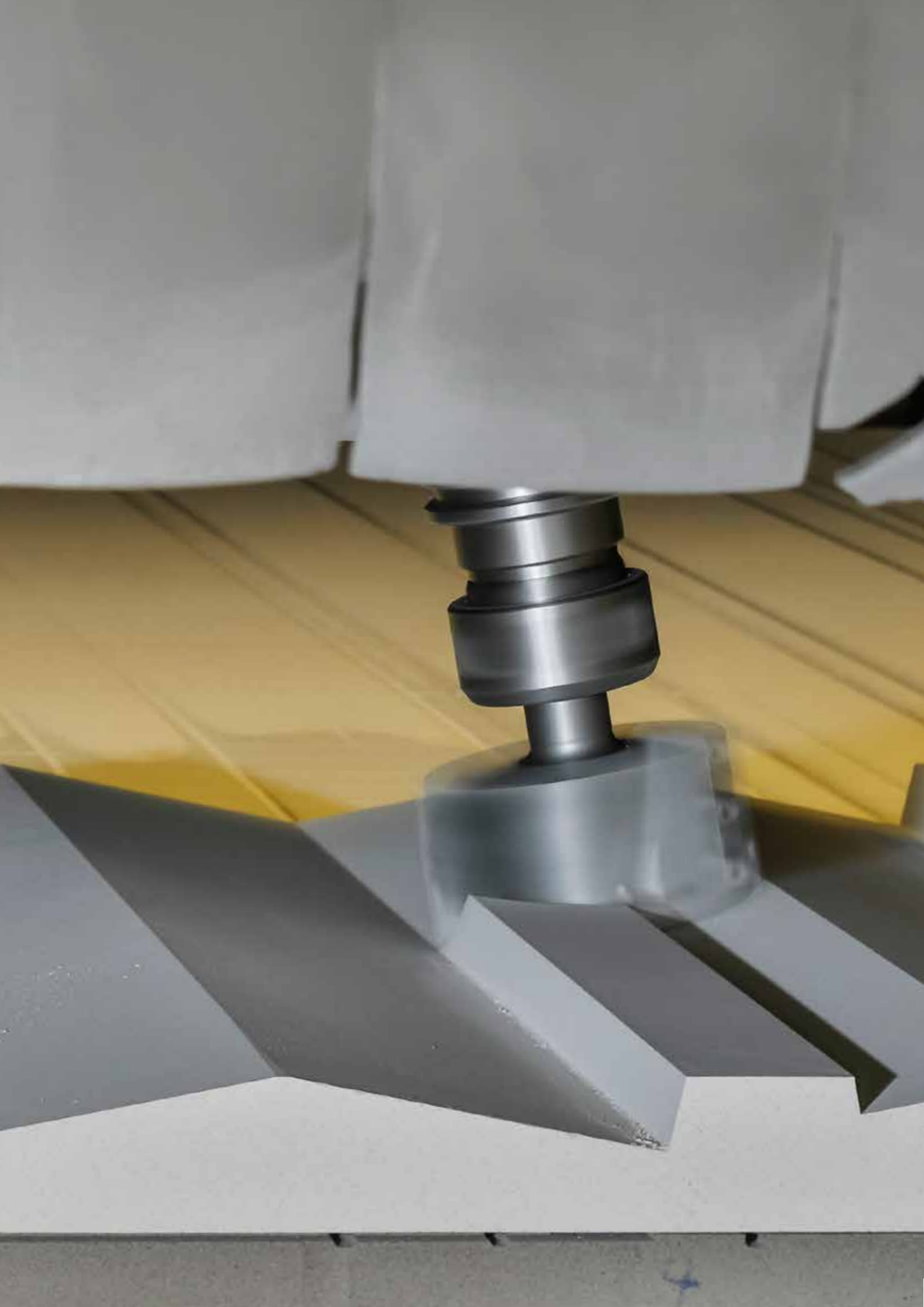
Ball milling cutter



Corner rounding milling cutter

More complex designs – with an undercut, for example – can be produced using a casting process.





Facades with profile

Created using sculptural shapes and ledges

Emphasise, contrast, transfer, convey, relate – a facade can do all this, and also reveal its poetic side. The art lies in the combination of function and decoration.

Frames and custom-made individual elements offer a contemporary interpretation of what it means to decorate a facade.

Left:

Residential and commercial building
DE-Freiburg im Breisgau
Architect: Ackermann+Raff GmbH & Co. KG, Stuttgart, Germany
Material/method: ledges made of Verolith, sawn, 3 coats of facade paint (smooth)

Top right:

Neue Mitte area
DE-Eschborn
Architect: Fritz Ludwig Architekten BDA, DE-Frankfurt am Main
Material/method: ledges made of Verolith, sawn, 3 coats of facade paint (smooth)

Bottom right:

Multiple dwelling
DE-Mühlheim am Main
Architect: Wohnbau Mühlheim GmbH, DE-Mühlheim am Main
Material/method: sculptural shapes made of Verolith, milled, 3 coats of facade paint (smooth)





Facades with profile

Created using panels

Bevels, engravings, and reliefs lend the facades a narrative significance. Soft and amorphous shapes hone the facade's power of expression and plasticity. It becomes the construction's messenger, playing with both light and shadow.

Left:

Landeskirchenamt (regional church office)
DE-Munich
Architect: Wandel Lorch WHL GmbH, DE-Saarbrücken
Material/method: panels made of Verolith, milled,
substrate coating of primer, 2 coats of facade paint
(fine)



You can find out more about the "Landeskirchenamt" project in our "best practice" film.

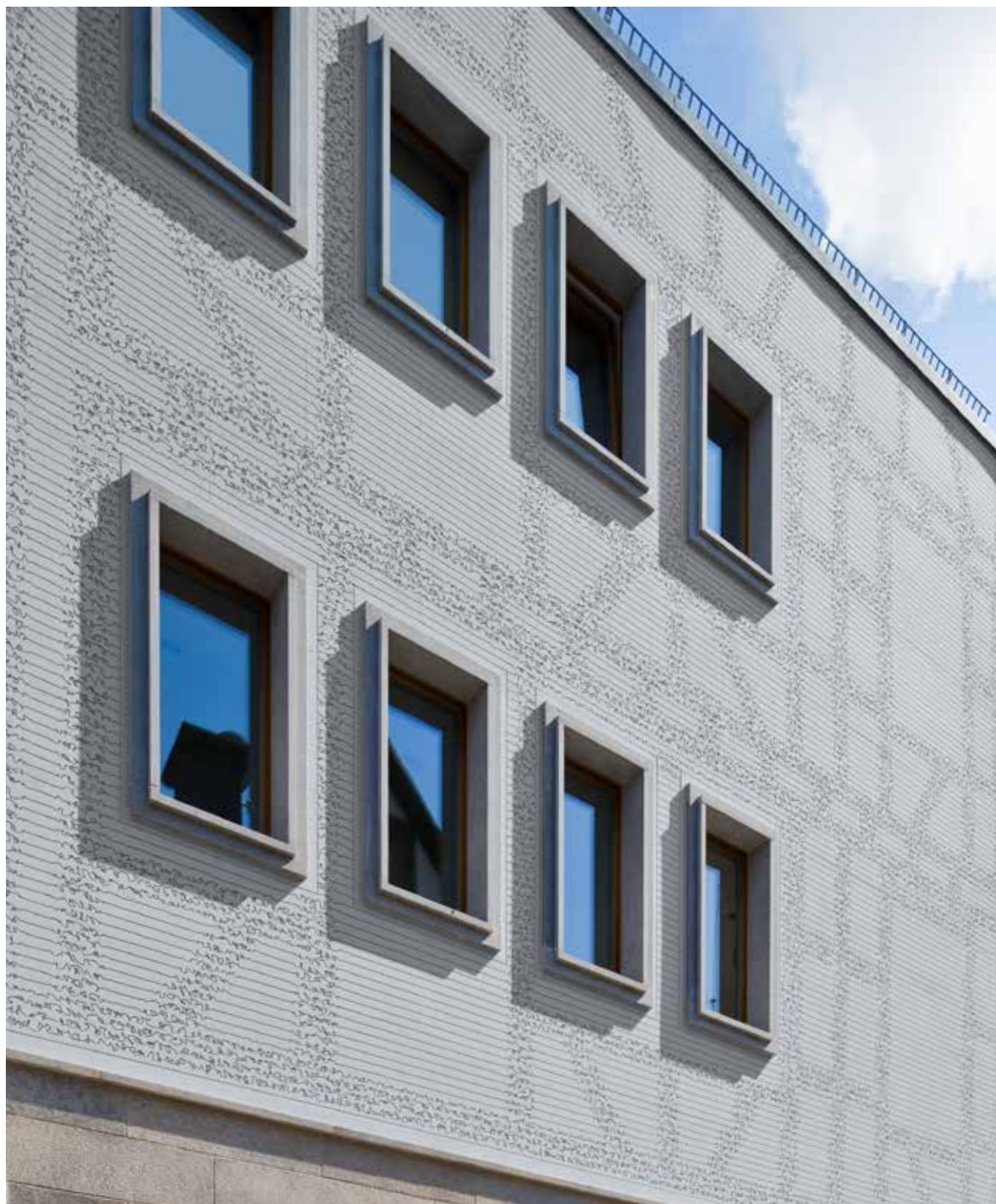
Right:

"Kleine Rittergasse 11", residential building and studio
DE-Frankfurt am Main
Architect: FrankenArchitekten GmbH, DE-Frankfurt am Main
Material/method: panels made of Verolith, milled,
substrate coating of primer, 2 coats of facade paint
(rough)

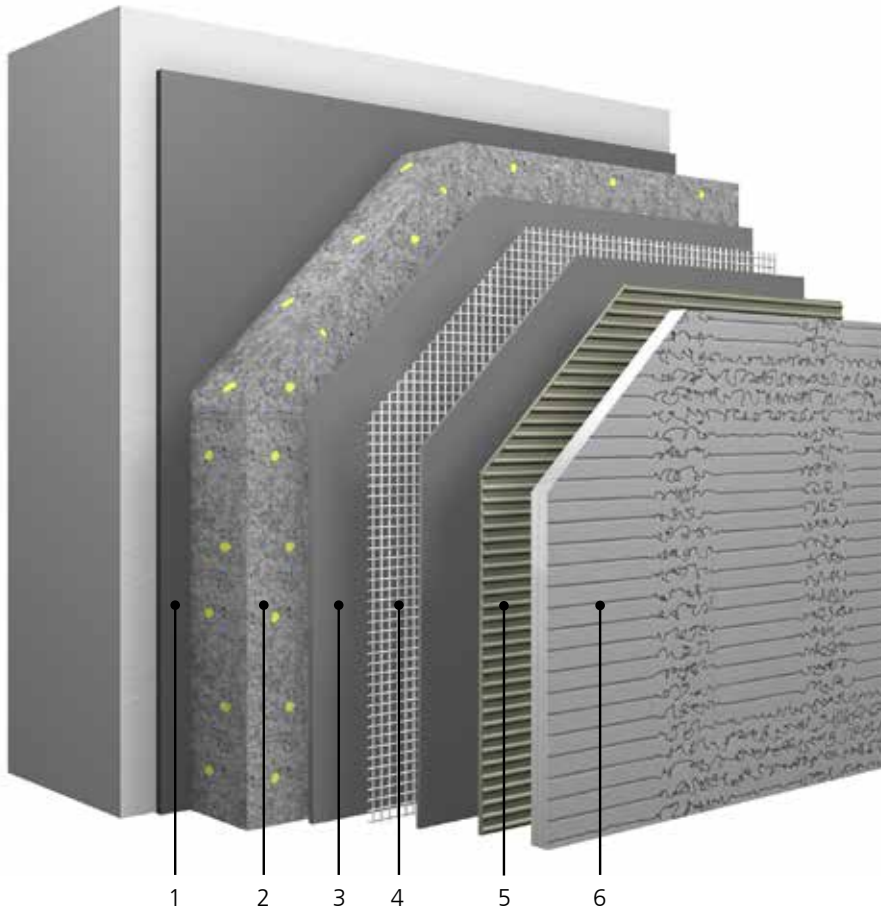


You can find out more about the "Kleine Rittergasse 11" project in our "Best Practice" films.





Reliability



System build-up

1 Adhesive; 2 Insulation; 3 Base coat; 4 Reinforcement; 5 Adhesive; 6 3D facade element made of Verolith, coated 3 times (essential)

Tested systems:

Reaction to fire:

- StoTherm Classic® and StoTherm Vario (insulation: polystyrene): B1-s1, d0 in accordance with EN 13501-1*
- StoTherm Mineral (insulation: mineral wool): A2-s1, d0 in accordance with EN 13501-1*
- Ageing tests using hygrothermal weathering
- Practical experience gained since 1998
- All system components subject to constant quality control

* Reaction to fire on external wall insulation systems in accordance with EN 13501-1, in the defined area in accordance with the classification report MA 39 – VFA 2014-1649.01 (EWIS with mineral wool insulants) and MA 39 – VFA 2014-1649.02 (EWIS with EPS insulants). Different classifications apply for cast elements.

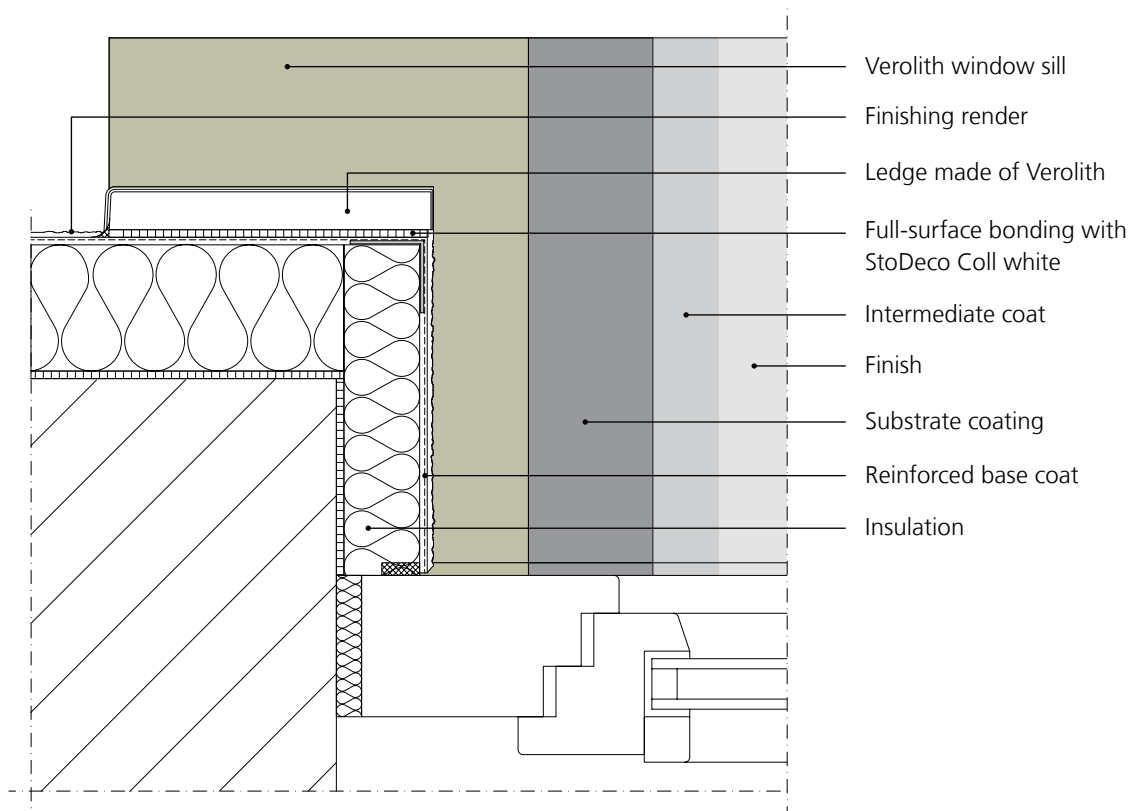
Extensive planning data

Construction details for all standard solutions can be found online, along with profile examples which can serve as a basis for your own designs.

Personal consultation

Our team of advisors – comprising project managers, sales reps, and technical advisors – will support you throughout all planning phases, including detailing, tendering, and applicator training.

The team of advisors is in turn supported by experts in three-dimensional facade elements and EWIS from our technical project service.



Construction detail

Set-back window with surrounding ledge and Verolith window sill

Digital process chain

To ensure that your designs are realised with outstanding precision, we process your projects – right up to delivering the facade elements – within a digital process chain.



Under the emblem “iD – Individual Digital Engineering”, Sto gathers services and technical solutions linking parametric design processes with industrial production methods. Our iD solutions are based on integrated digital process chains and allow designs to be directly and exactly implemented.

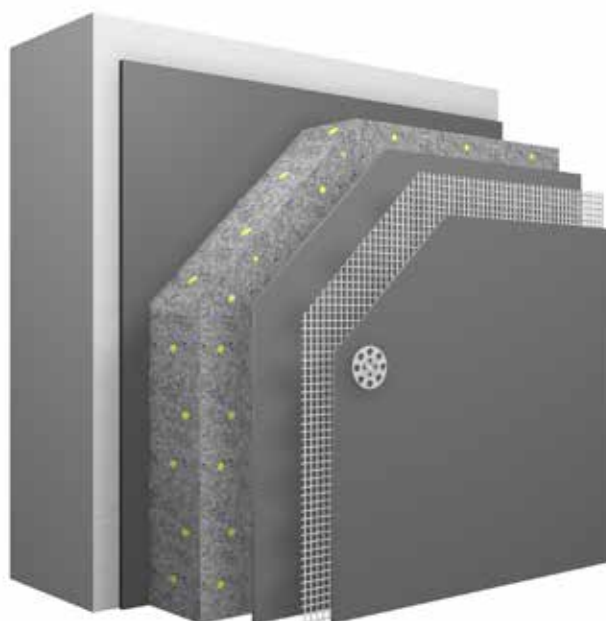


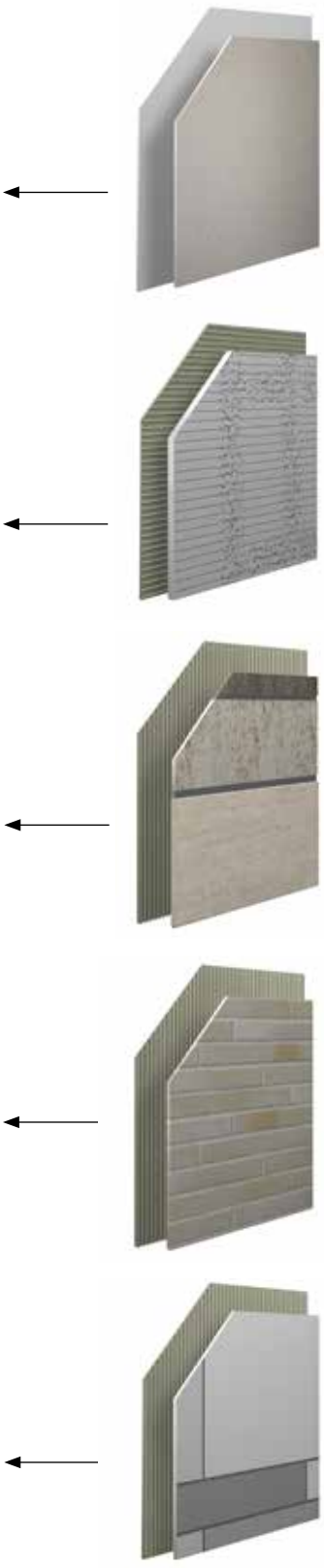
Find out more about the digital process chain for projects with three-dimensional Verolith facade elements in our film.

One insulation system, many options

External wall insulation systems are applied to approximately 170 million m² of facade surface throughout Europe each year. They not only contribute significantly to the building's energy efficiency but also offer numerous options for decorating the facade surface.

The three-dimensional facade elements showcased in this brochure are just one way of customising your EWIS facade.





Render

Our seamless coating comes in a vast range of colours and textures, offering a multitude of design options.



Three-dimensional facade elements

For three-dimensional facade decoration, we can produce sculptural shapes, ledges, and panels from our Verolith material to apply to EWIS in accordance with your design.



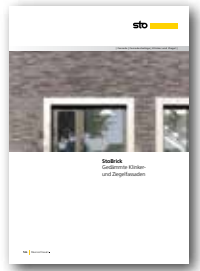
Natural stone slab

Limestones from our own quarries in Germany are available in modular formats to offer you an individual and economically viable way of decorating your facade using stone.



Brick slips

The StoBrick range offers six groups of brick slips, including high-density brick, to provide you with a superb selection of masonry for your project.



Prefabricated render elements

Sto-Ecoshapes are prefabricated render elements that can be individually designed. The material with up to 90 % mineral-based content can also be used to clad facades which are curved on one side.



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