

FACADE SYSTEMS

TONALITY[®]
NATURAL FACADES

THE CERAMIC SLAT

FAST. ROBUST. SMART.



**BUILDING
INNOVATIONS**



**LEIPFINGER
BADER**



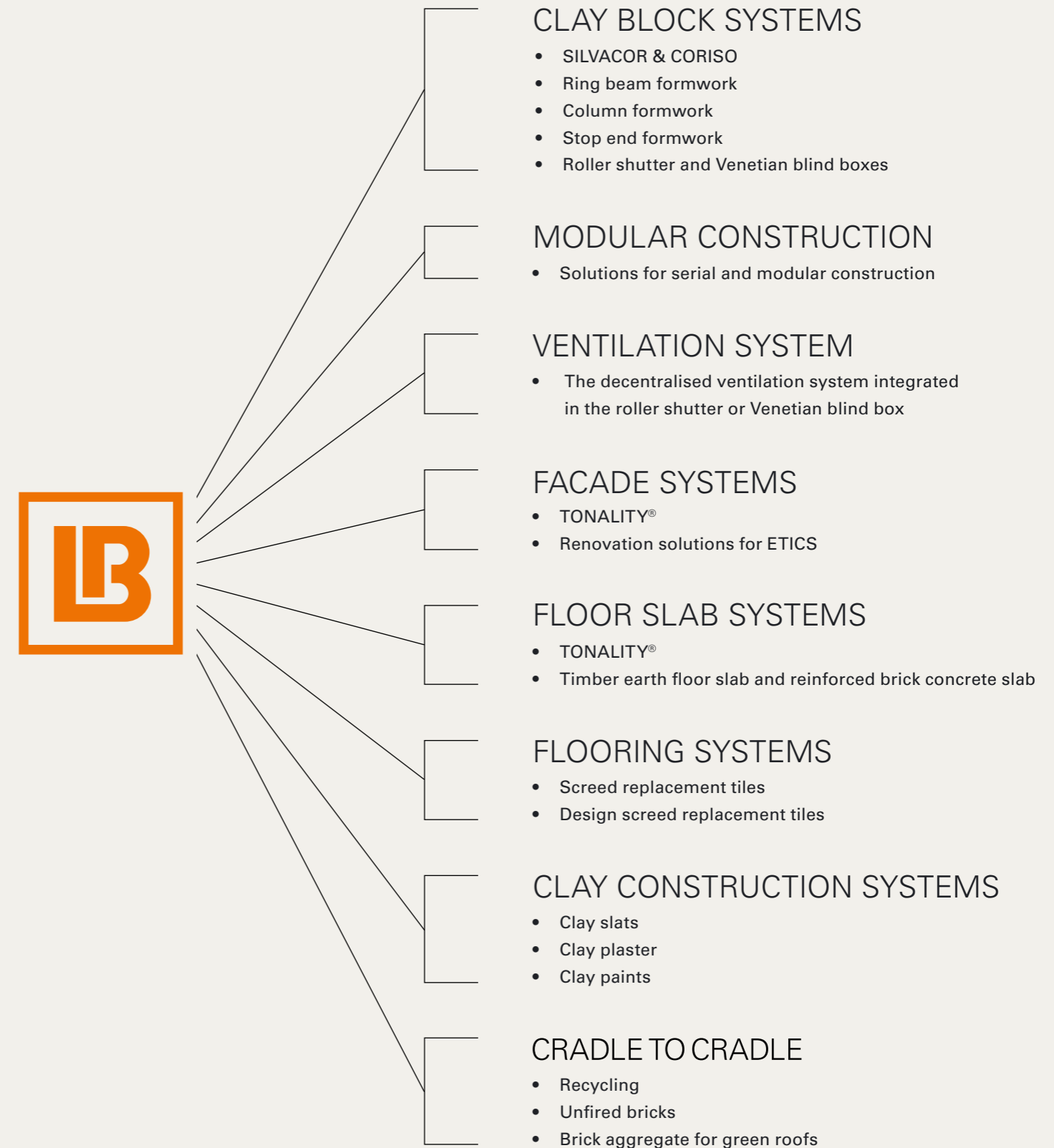
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STRONG ALONE, STRONGER TOGETHER

Whether new construction or renovation, LEIPFINGER-BADER offers integrated system solutions for the sustainable present and future of construction:



PREFACE

THOMAS BADER, OWNER AND MANAGING DIRECTOR OF LEIPFINGER-BADER GMBH

As part of the LEIPFINGER-BADER Group, we are among the leading manufacturers of building materials and system components for climate-neutral construction. We see ourselves as innovation drivers with a clear focus on ecologically sustainable products and a reliable partner to our customers. Our strong local ties are also reflected in our love on natural raw materials. We have been processing naturally occurring clay for decades. At our location in Weroth (Westerwald), we extract Europe's finest clays and process them into a

high-end building material using our state-of-the-art production facilities. We are convinced that we must reduce material consumption for environmentally friendly buildings with a healthy indoor climate. Therefore, we attach particular importance to continuous circular economy in everything we do, making us one of the trendsetters in the industry.

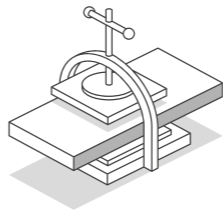


QUALITY THROUGH MCS – TURNING CLAY INTO A CERAMIC ELEMENT



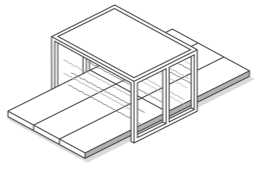
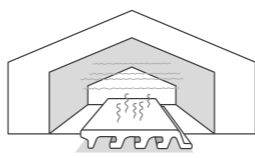
MICRO-PROCESSING THE CLAY

Our work begins at a very fine level: In the first step, the clay is ground to a grain size of 64 micrometres (0.064 millimetres). The fireclay added is also ground until it is ultra-fine. Both raw materials are then placed in the press.



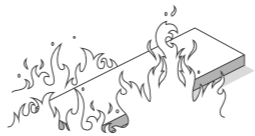
WORK AT HIGH PRESSURE

With the aid of our vacuum extrusion process, the desired ceramic element is compressed at high pressure. The fine processing of the clay and fireclay in combination with a high compression pressure guarantees a high level of solidity



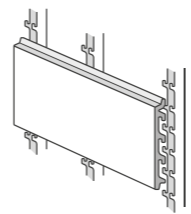
HOMOGENEOUS DRYING & HOT GLAZING PROCESS

In the next step, the ceramic elements are dried and glazed. Specially designed multi-storey roller dryers ensure homogenous drying. The traditional, digitally controlled hot-glazing process gives the final product the desired surface.



SINTERING – NOW THINGS REALLY HEAT UP

At maximum temperatures of up to 1,200 °C, the ceramic elements are fired to the point of sintering. The material, which has already been heavily compressed, is compacted even further. All raw materials are fused together.





SUSTAINABILITY AT THE HIGHEST LEVEL OF SAFETY

RESISTANT & ROBUST

UV- and frost-resistant – regardless of weather and thermal influences. Thanks to their high level of hardness, TONALITY ceramic facades are impact- and scratch-proof – and are characterised by colourfastness and dimensional stability. TONALITY facades require no maintenance and have a life expectancy well over 100 years.

FUTURE-DRIVEN

100% natural. No use of composite materials, plastics or chemicals. The natural advantages of Westerwald clay are so impressive that there is no need for additives – benefiting both human health and the environment.

RE-USE AFTER USE

The facade elements including the supporting structure can be used in other projects according to the re-use principle. They can be simply removed and installed elsewhere, eliminating additional CO2 emissions caused by recycling



THE FACADE OF THE FUTURE

THE FACADE FOR CARPENTERS, FACADE BUILDERS AND EXPERIENCED DO-IT-YOURSELFERS

LOW DEADWEIGHT THANKS TO SINGLE-SHELL DESIGN

Weighing about 29 kg/m², the TONALITY slats have a very low dead weight, reducing static stress on the facade to a minimum. Their low deadweight makes the TONALITY facades suitable for nearly any wall structure.

SAFETY FOR GENERATIONS

If the worst comes to the worst: Both the substructure and the facade elements withstand the roughest of conditions.

As per fire classification, TONALITY products belong to group A1 – meaning they are incombustible. Even an earthquake cannot harm the system.

INVISIBLE FASTENING

The TONALITY slat element system is characterised not only by easy installation, but also by fastening points that are invisible after installation.

ECONOMIC ADVANTAGES

The hook technique perfected and patented by TONALITY ensures short installation times, saving time and costs.

PERMANENT GRAFFITI PROTECTION

In terms of characteristics, our TONALITY facade elements have a lot to offer. They are impact- and scratch-proof, UV- and frost-resistant and resistant to graffiti, weather and temperature influences. In short: Our facade elements rise to every challenge – without losing either shape or colour.

EASY INSTALLATION

The ceramic slats and the aluminium system rail are optimally matched to each other. The slats are secured by a broad locking pin in the profile.

The default pre-bent angle can be bent into the desired final position using customary needle-nose pliers. Integrated pressure springs ensure a tension-free, but secure fit of the slats.

AVAILABILITY

The slats come in four modern colours with a matched substructure and are readily available from specialist retailers as in-stock products.

They are suitable for use in both private residential construction and larger surfaces in rental, municipal and commercial buildings.

ADVANTAGES OF THE REAR-VENTILATED CERAMIC FACADE

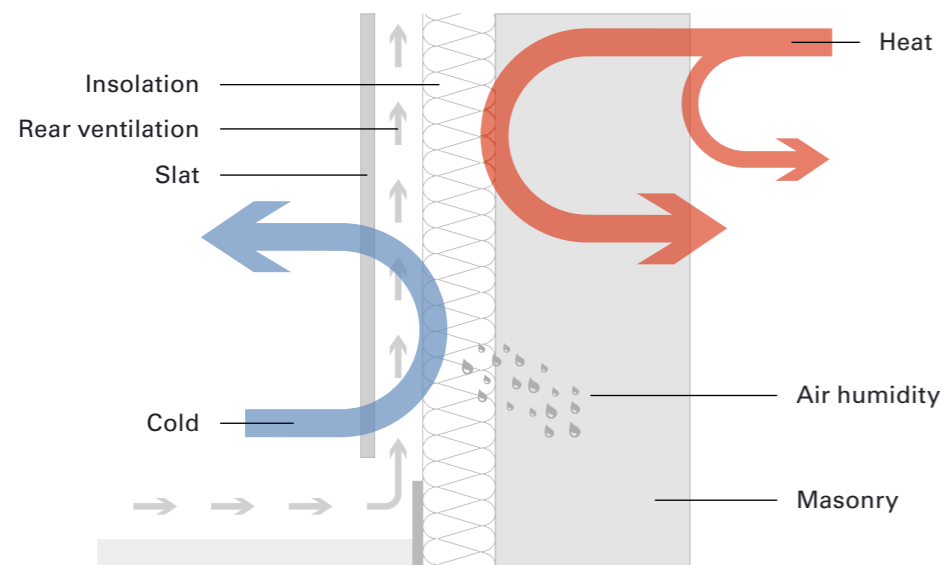


PRINCIPLE OF THE REAR-VENTILATED CURTAIN FACADE

The structure of the rear-ventilated curtain facade is a highly efficient system due to the physical separation of insulation and weather protection functions. Due to the space between the facade cladding and the

insulation, air can circulate behind the facade cladding and remove any moisture. This so-called stack effect is a physical principle that works continuously throughout the system's entire service life. In terms

of cost-effectiveness, ecology and durability, the rear-ventilated curtain facade is gaining importance as a superior system in new construction and renovation. It can be used for all building types and heights.



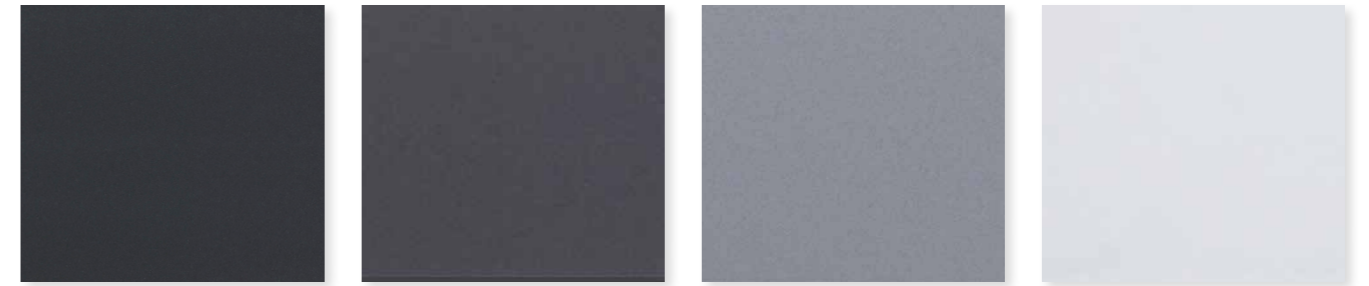
▲ The rear-ventilated curtain facade contributes to reducing energy costs and fully meets the requirements for energy-saving facades. When using adequate insulation thicknesses, the rear-ventilated curtain facade can achieve low-energy and passive house standards.

FOUR COLOURS ONE BRILLIANT SIZE

COLOURS

The ceramic slats are available in four modern design colours and with a plain surface: dark grey, medium

grey, light grey and white matt. The colours can also be combined



70025
black matt

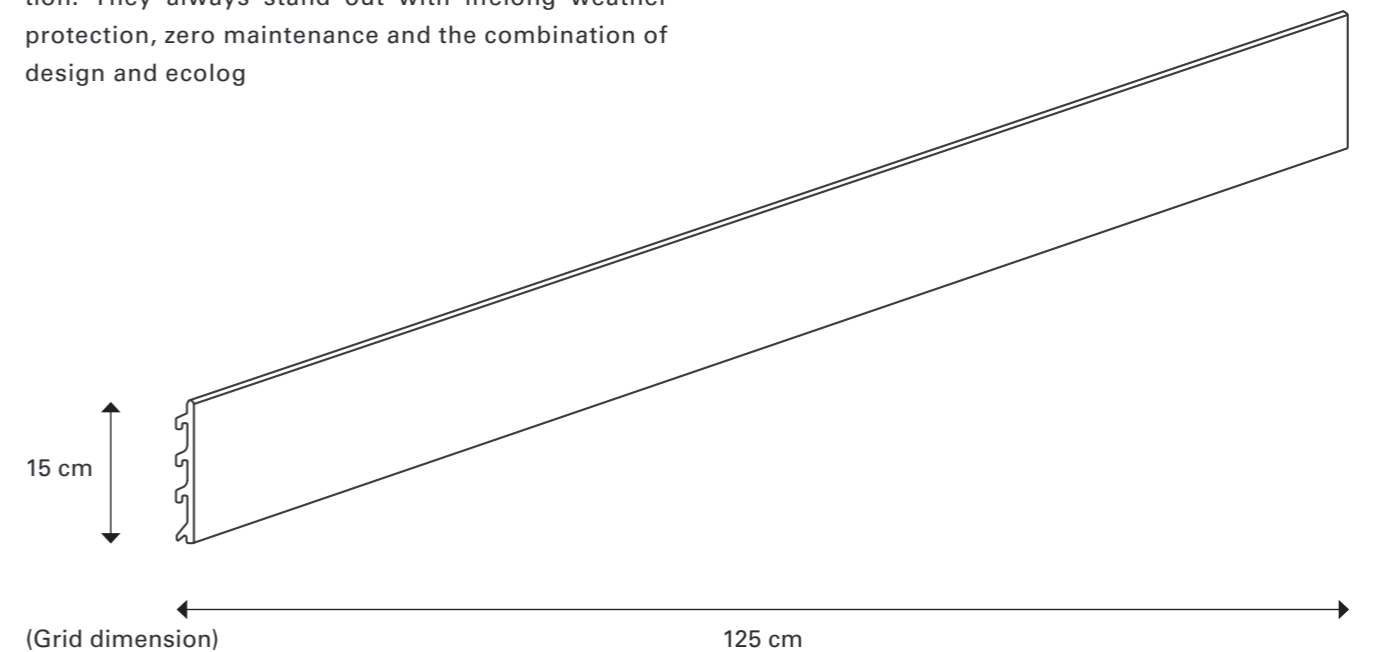
70005
dark grey

70014
medium grey

70015
white matt

SIZE

Their format and low weight make the slats a perfect choice for use in both solid and wood frame construction. They always stand out with lifelong weather protection, zero maintenance and the combination of design and ecology



GOOD TO KNOW

INSTALLATION INSTRUCTIONS

THE SUBSTRUCTURE AT A GLANCE

The ceramic elements are mounted in horizontal position in a 2.85-m-long aluminium system rail, which is in turn fastened vertically to the ground, making it possible to install a total of 19 rows of slats at a time. This makes things easy and guarantees a uniform joint pattern. The combination of open joints and invisible fastening creates a particularly classy appearance.

INSTALLING BLACK WEATHER RESISTANT MEMBRANE

To create a perfect, dark joint pattern, we recommend installing black weather resistant membrane underneath the substructure.

HORIZONTAL PROFILES

The ceramic slats are mounted in the profile in horizontal position and adjusted. Note: The cutting marks (grooves) of the aluminium system rail are ideal for vertical alignment using a laser or string.

MOUNTING THE CERAMIC SLATS

The slats are mounted in the preinstalled profiles. Cross, half or one-third bond is possible. To determine the material requirement, we recommend preparing a simple implementation plan in which the surface is outlined and the building openings (windows, doors, etc.) are marked and dimensioned. The desired bond (e.g. half, one-third or two-thirds bond) is then applied to the surface. This approach makes it possible to precisely determine the various profile types and ceramic slats. Further information about the profile types is provided in the installation instructions.

SECURING AGAINST LATERAL DISPLACEMENT

The slats are secured using a broad locking pin in the profile. The default pre-bent angle can be bent into the desired final position using customary needle-nose pliers.



NOTE

Details on lateral and top ends, corner joints and corner solutions, connections to other materials and window solutions (lintels, reveals, sills) are provided in the installation instructions. The necessary material has to be ordered by the customer.



INSTALLATION INSTRUCTIONS

Open our digital installation instructions by simply scanning the QR code.



PROCESSING INSTRUCTIONS

Whether new construction, renovation, single-family residential, kindergarten or simply as weather protection in facade areas particularly exposed to weathering: The novel slats are suitable for small and large facade surfaces in various areas of construction. This includes in particular wood frame construction, because ceramics and wood as natural building materials form a logical symbiosis in terms of ecology and sustainability. Carpenters, in particular, are inherently familiar with slat formats, enabling them to fasten the facade system to a wooden supporting structure without additional effort. This makes it possible to construct design-oriented wooden house facades with a natural charm that maintain their appearance and material properties and remain maintenance-free throughout their service life – a key advantage compared to conventional wooden cladding

- Facade builders, carpenters and experienced do-it-yourselfers can buy the slats quickly and flexibly from specialist retailers, cut them to length and install them – including the matching substructure.

NOTE

Simply cut the substructure (aluminium system rail) to length at the cutting marks. To do so, we recommend using a customary wet cutter (cutter for stoneware 3-5% water absorption).

BUILDING ON PERSONALIZED CUSTOMER RELATIONSHIP

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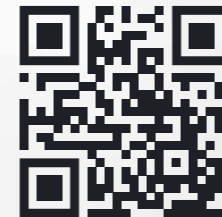


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