

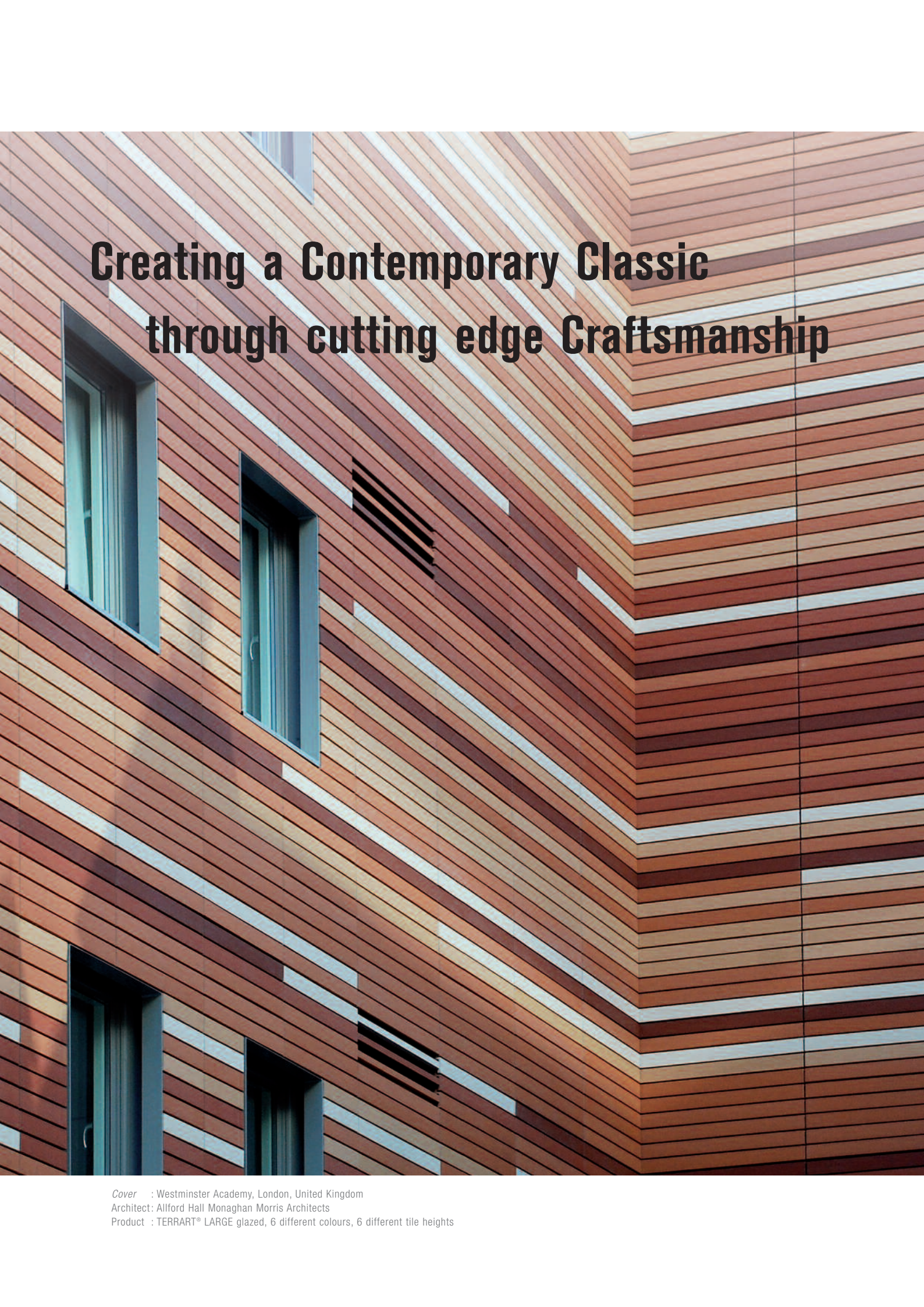
**NBK** | ARCHITECTURAL  
TERRACOTTA



**Terracotta Façade**

**HunterDouglas**

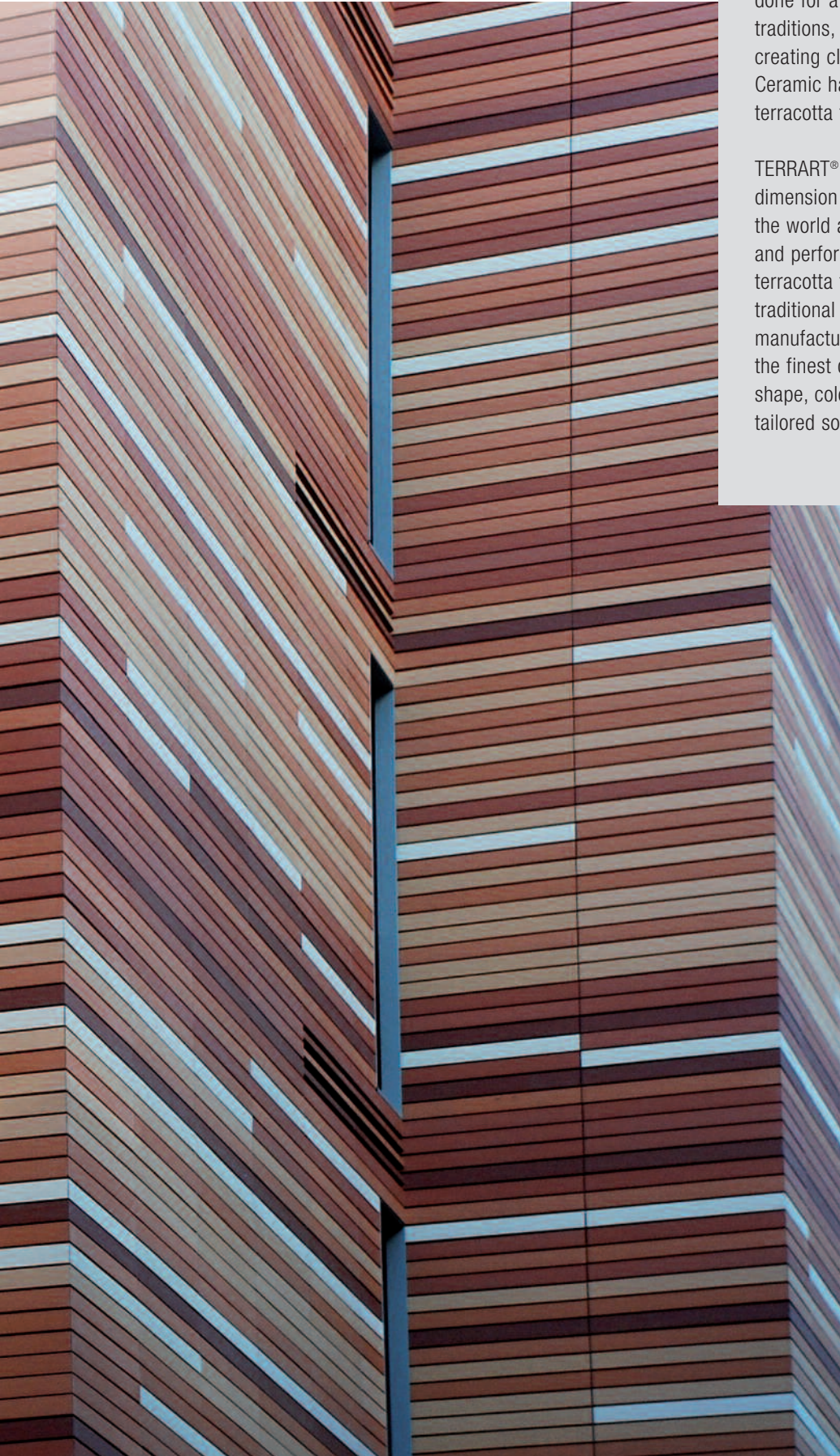
FAÇADES



# Creating a Contemporary Classic through cutting edge Craftsmanship

*Cover* : Westminster Academy, London, United Kingdom  
*Architect*: Allford Hall Monaghan Morris Architects  
*Product* : TERRART® LARGE glazed, 6 different colours, 6 different tile heights

Below : St. Botolphs Hall apartments, London, United Kingdom  
Architect: Matthew Lloyd  
Product : TERRART® LARGE + BAGUETTE



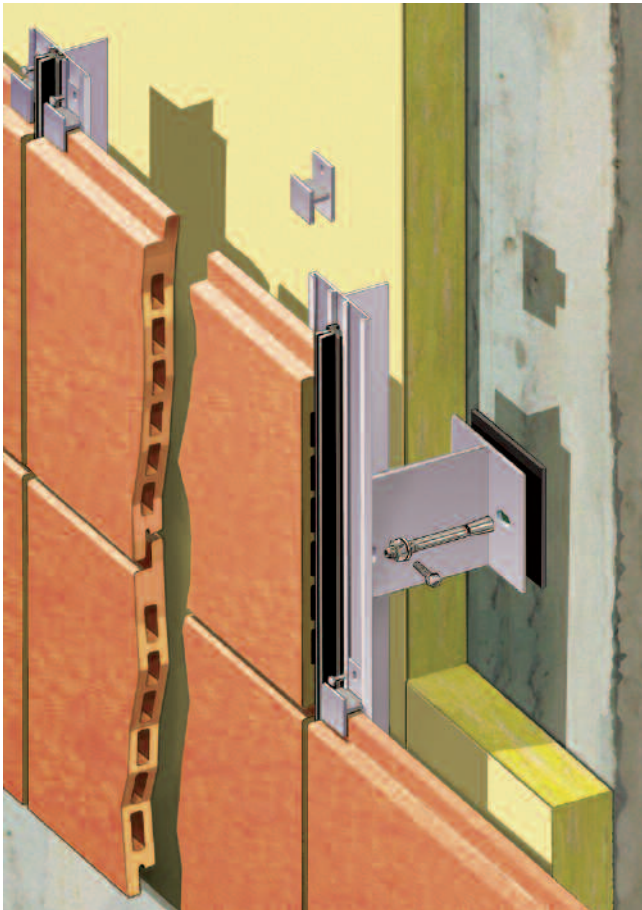
While technology has continuously progressed, the manufacture of clay-based construction materials still centre on the three elements of fire, water and clay as it has done for a millennia. Exploiting all the age old traditions, skills and workmanship involved in creating clay materials, HunterDouglas® NBK Ceramic has developed the TERRART® terracotta façade system.

TERRART® has opened up a completely new dimension in façade design. Architects around the world appreciate the tremendous creative and performance possibilities offered by this terracotta façade system. Combining traditional craftsmanship with advanced manufacturing technology, TERRART® enables the finest design details to be developed in shape, colour, texture and glazing for unique, tailored solutions.

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# Design, Functionality and Comfort

Choosing the right façade system can be challenging. With the TERRART® Terracotta Façade from HunterDouglas® NBK Ceramic, you will find a system that effortlessly blends form and function, whilst enhancing the building performance.



## DESIGN: CREATIVE FREEDOM

Our terracotta façades offer unparalleled freedom in design. With 'Large', 'Mid', 'Shingle' and 'Baguette' ranges, the versatile TERRART® system offers architects maximum scope for creative expression. All ceramic elements are produced individually for each project in the colour, shape, surface finish and colour desired for custom application.

## FUNCTIONALITY: COMMITTED TO QUALITY

The individual components of TERRART® Terracotta Façade are manufactured to maximize shape accuracy and guarantee best fit.

State-of-the-art drying and firing techniques create high quality units up to 1,800 mm long. In addition, TERRART® Terracotta Façade products are regularly subjected to independent monitoring by the Society for Quality Assurance and Material Testing (QsM). HunterDouglas® NBK Ceramic will save samples in the project archive for a period of ten years so that an exact replacement can be supplied for future use.

## COMFORT: THE PERFECT PROTECTION

TERRART® Terracotta Façade is a ventilated Rainscreen façade system whose exposed components are made exclusively from natural clays. The façade system significantly improves the performance and comfort level for the building and its occupants.

Produced from one of the most weather resistant construction materials available, this highly robust and made-to-measure façade solution is able to withstand the most challenging environmental conditions like severe frost, high humidity levels and harmful, naturally occurring chemical. It protects buildings against heat, noise and shields from rain, wind and snow whilst providing consistent interior temperatures and humidity levels.

## RECYCLABILITY

The TERRART® terracotta components can be entirely recycled throughout the production process, preventing waste. The finished end product is suitable for re-use in the production process. The total waste product is completely removable and can be completely separated and recycled.

Project : National Bank of Baden-Württemberg, Stuttgart, Germany  
Architect: WWA Architects Munich and WMA Architects Stuttgart  
Product : TERRART® Special Shapes

## OPTIONS FOR EVERY APPLICATION

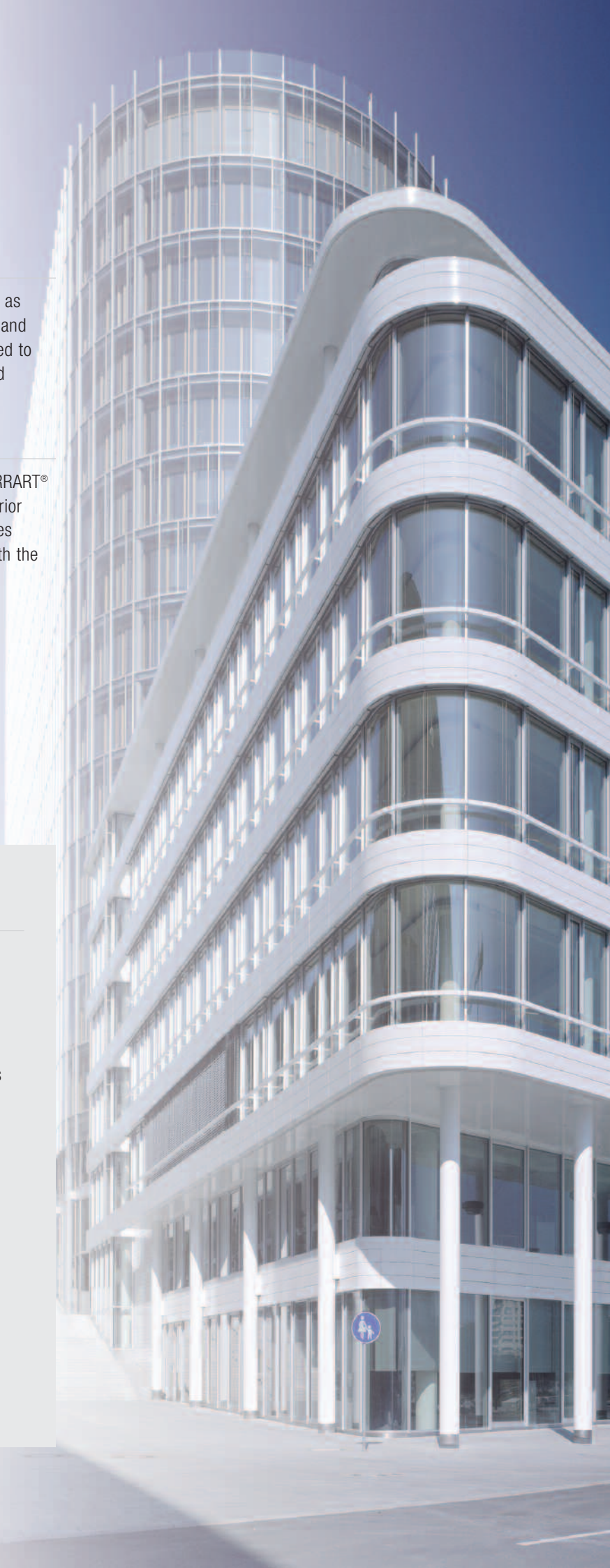
The flexibility in façade element size and shape, as well as special corner solutions and the wide variety of colours and finishes, allows TERRART® terracotta façade to be applied to almost any new or existing substructure with simple and adjustable fixings.

## COVERAGE AT ANY HEIGHT

From single storey buildings to high-rise structures, TERRART® Terracotta Façades provide an elegant and durable exterior solution. The system resists high wind loads and includes special corner solutions that are precisely integrated with the existing support systems.

### HUNTERDOUGLAS® ARCHITECTURAL TERRACOTTA - KEY FEATURES

- Ventilated Rainscreen façade solution
- Natural material
- Wide range of products and sizes with optional special solutions
- Unlimited options for attractive surface finishes
- Wide variety of standard colours. Special colours and glazing upon request
- Multiple corner solutions
- Large façade elements possible
- Made-to-measure
- Horizontal and vertical applications
- Frost, UV and high chemical resistance
- Unique and secure mounting system
- Easy installation
- Suitable for any building size - high or low
- Durability
- 100% recyclability rate
- Low maintenance
- Suitable for refurbishment projects

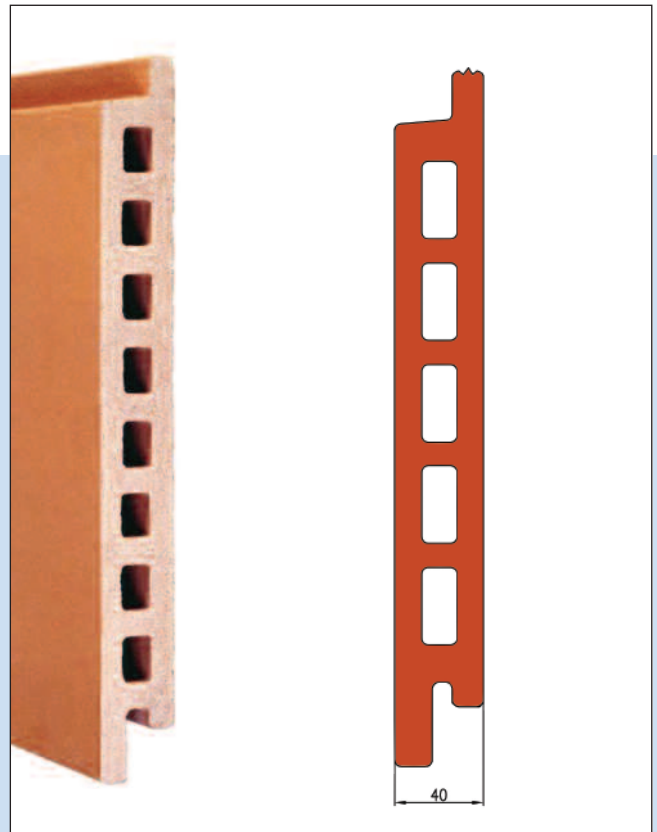


The design characteristics of TERRART® LARGE enables unique application possibilities. The combination of very large element sizes and endless varieties in shape, surface finishes and colour creates unequalled forward looking architecture.

The large format elements are individually manufactured to create a product which seamless fits its application.

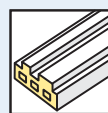
## TERRART® LARGE

- Length: max. 1,800 mm  
Special sizes upon request
- Height: max. 800 mm. The height of the elements can be adjusted to the desired horizontal grid. Bigger sizes upon request
- Thickness: approx. 40 mm. Hollow chambers, according to production specifications
- For corners mitrecut elements or cut and bond corners are available. Alternatively, specially designed corner plates with a maximum side length of 250 mm and a maximum height 300 mm can be provided
- Surface finishes: Natural, glazed, honed, textured, peeled and profiled. Curved surfaces can not be polished. Other surfaces are available on request
- Colours: For standard colours see our colour table. Other colours are available on request. Glazing according to customer wishes or RAL specifications
- Mass per unit area: approx. 60 kg/m<sup>2</sup> for 40 mm tiles

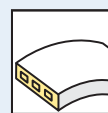


## TERRART® LARGE - KEY FEATURES

- Enables extremely large terracotta façade elements
- Unlimited options for attractive surface finishes
- Wide variety of standard colours and special colours and glazing upon request
- Multiple corner solutions
- Made-to-measure
- Horizontal and vertical element orientation
- Suitable for any building size - high or low
- Special designed substructure



Texture



Curved



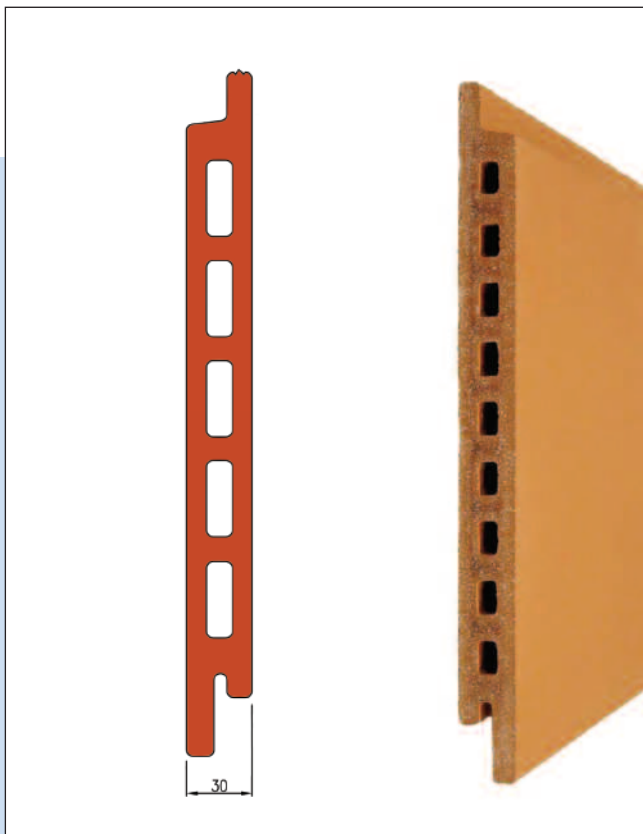
Corner



Finish

Below : Astra Turm, Hamburg, Germany  
Architect: Engel und Zimmermann  
Product : TERRART® LARGE





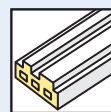
Below : MTCT, Minneapolis Community & Technical College, Minneapolis, USA  
 Architect: Architectural Alliance  
 Product : TERRART® MID

#### TERRART® MID

- Length: max. 1,400 mm.  
Special sizes upon request
- Height: max. 300 mm. The height of the elements can be adjusted to the desired horizontal grid. Special sizes upon request
- Thickness: approx. 30 mm. Hollow chambers, according to production specifications
- For corners mitrecut elements or cut and bond corners are available. Alternatively, specially designed corner plates with a maximum side length of 250 mm and a maximum height 300 mm can be provided
- Surface finishes: Natural, glazed, honed, textured, peeled, profiled. Curved surfaces can not be polished. Other surfaces are available on request
- Colours: For standard colours see our colour table. Other colours are available on request. Glazing according to customer wishes or RAL specifications
- Mass per unit area: approx. 55 kg/m<sup>2</sup>

#### TERRART® MID - KEY FEATURES

- Suitable for medium size terracotta façade elements
- Unlimited options for attractive surface finishes
- Wide variety of standard colours and special colours and glazing upon request
- Multiple corner solutions
- Made-to-measure
- Horizontal and vertical element orientation
- Suitable for any building size - high or low
- Specially designed substructure



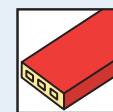
Texture



Curved



Corner



Finish

Left : MAD Museum of Arts & Design, New York, USA  
 Architect: Allied Works Architecture  
 Product : TERRART® MID



TERRART® MID is distinguished by the high degree of adaptability of the product. The surface structure, colour and shape of the facade elements can be adjusted to customer requirements. This creates a product that is fully tailored to its final application.

The specially developed substructure fits all TERRART® products, offering maximum flexibility.

Above : Commercial building Ku'dammeck, Berlin, Germany  
Architect: von Gerkan, Marg & Partner, Hamburg  
Product : TERRART® MID



A tradition in facade construction, the TERRART® SHINGLE façade offers an endless variety of shapes, surface finishes and colours to create a classic modern look.

The shingle facade element can be applied in made-to-measure medium and large sizes that seamlessly fit its application.

### TERRART® SHINGLE

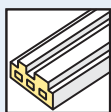
- Length: max. 1,800 mm. The length of the ceramic elements can be adjusted individually to maximum 1,800 mm. Special sizes upon request
- Height: max. 300 mm. The height of the elements can be adjusted to the desired horizontal grid. Special sizes upon request
- Thickness: approx. 25/40 mm. Hollow chambers, according to production specifications
- For corners mitrecut elements or cut and bond corners are available. Alternatively, specially designed corner plates with a maximum side length of 250 mm and a maximum height 300 mm can be provided
- Surface finishes: Natural, glazed, textured, peeled, profiled. Other surfaces are available on request
- Colours: For standard colours see our colour table. Other colours are available on request. Glazing according to customer wishes or RAL specifications
- Mass per unit area: approx. 60 kg/m<sup>2</sup>



*Below* : GWA Gemeente waterleidingen, Amsterdam, the Netherlands  
 Architect: Van Tilburg & Partners  
 Product : TERRART® SHINGLE

### TERRART® SHINGLE - KEY FEATURES

- Special designed element for shingled terracotta façade construction
- Suitable for medium and large size façade elements
- Unlimited options for attractive surface finishes
- Wide variety of standard colours and special colours and glazing upon request
- Multiple corner solutions
- Made-to-measure
- Horizontal element orientation
- Suitable for any building size - high or low
- Specially designed substructure



Texture



Curved



Corner



Finish

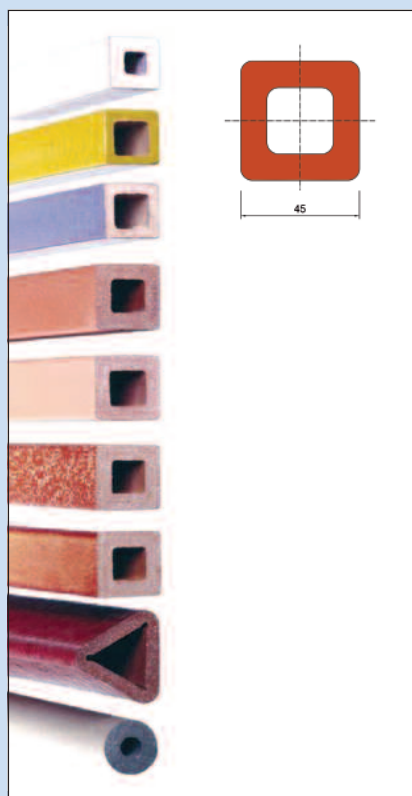




## TERRART® BAGUETTE

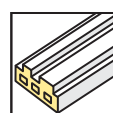
- Length: max. 1,600 mm. The length of the ceramic elements can be adjusted individually to maximum 1,600 mm. Larger sizes upon request
- Height: special shape element with diameter of 45 x 45 mm up to 150 x 50 mm. Most commonly used size is 50 x 50 mm. Special sizes upon request
- For corners mitrecut elements
- Surface finishes: Natural, glazed, textured, peeled. Other surfaces are available on request
- Colours: For standard colours see our colour table. Other colours are available on request. Glazing according to customer wishes or RAL specifications
- Mass per unit area: approx. 3.75 kg/m for a 50 x 50 mm diameter

Below : Markthaus, Mainz, Germany  
 Architect: Fuksas Architects  
 Product : TERRART® BAGUETTE Glazed

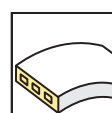


## TERRART® BAGUETTE - KEY FEATURES

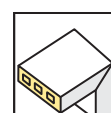
- Suitable for the creation of open and transparent terracotta façade designs
- Suitable for sun control
- Unlimited options for attractive surface finishes
- Wide variety of standard colours and special colours and glazing upon request
- Multiple corner solutions
- Made-to-measure
- Horizontal and vertical element orientation
- Suitable for any building size - high or low
- Specially designed substructure



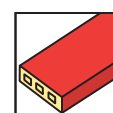
Texture



Curved



Corner



Finish



*Far left* : CNOOC, Beijing, China  
Architect: Kohn Pedersen Fox  
Product : TERRART® BAGUETTE + TERRART® LARGE

*Left* : Institut Pasteur, Lille, France  
Architect: BBF Architectes  
Product : TERRART® BAGUETTE

TERRART® BAGUETTE

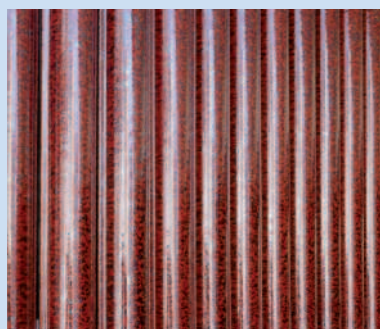
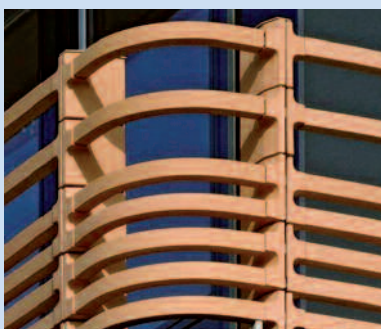
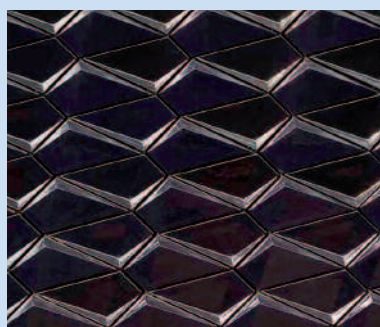
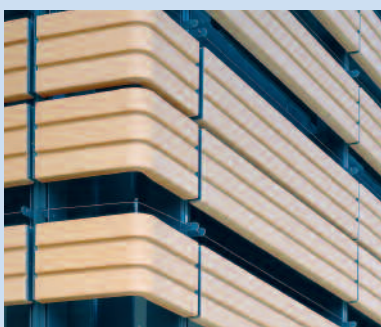
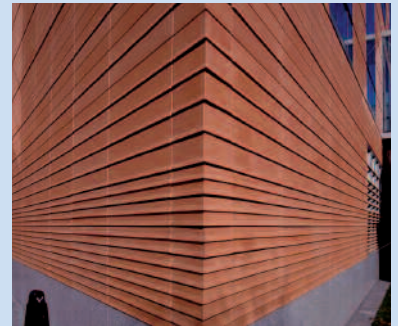
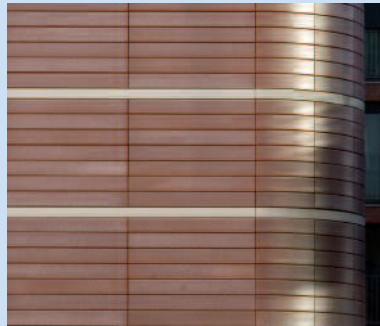
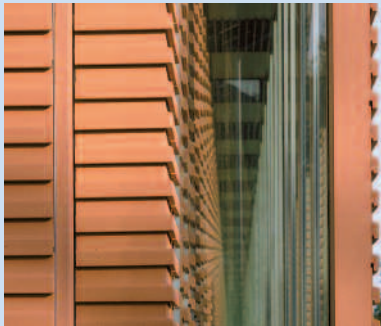
In its simple shape it shows its creative possibilities. TERRART® BAGUETTE is a ceramic pipe-shaped façade element with square, circular or oblong cross-sections. Next to the wide variety of surface structures and colours, the elements can be curved or a double baguette element can be created.

The pipe-shaped TERRART® BAGUETTE is especially suitable to create façades with an open appearance and sun control. Using TERRART® BAGUETTE with the special developed substructure it can be combined with TERRART® LARGE, MID and SHINGLE.

*Above* : Museum Brandhorst, Munich, Germany  
Architect: Professor Sauerbruch & Hutton  
Product : TERRART® BAGUETTE Glazed

The range of TERRART® products offers numerous other ceramic variations. On an individual basis, custom production is possible for a particular property, from elements with varying radii for the creation of elliptic shapes.

Production is carried out according to specifications, also as a hand-made single element if required. All bonded single elements must additionally be fixed mechanically on the construction site.

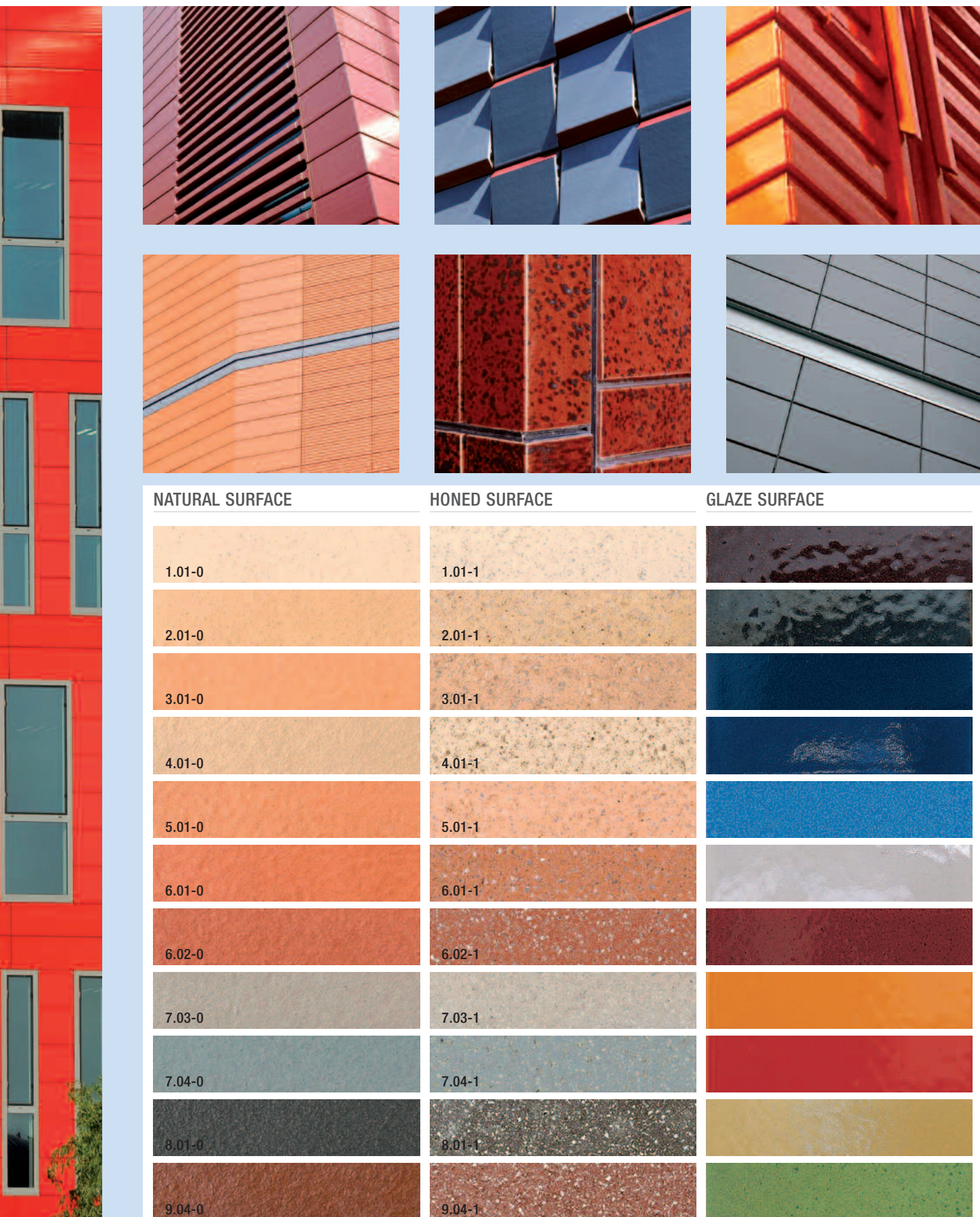


A multitude of profiles is available for the surface design of the TERRART® ceramic elements. The broad design spectrum ranges from the finest surface structure to strongly profiled reliefs. Natural surfaces, horizontal profiles and peeled surfaces are part of our standard programme. In addition, TERRART® façades can also be designed with individual profiles and surfaces.



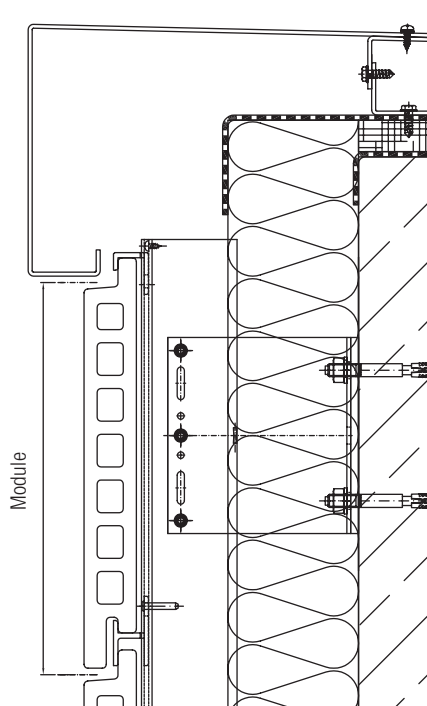
TERRART® glazed and honed finishes are being increasingly exploited as a design feature in contemporary architecture.

HunterDouglas® NBK Ceramic's sophisticated mixing techniques and traditional firing methods, allows us to work closely with designers to create virtually any colour and surface texture for any building design.

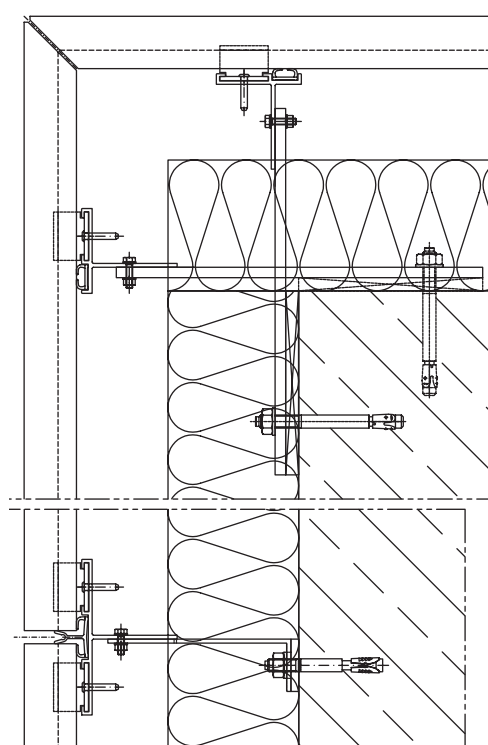


Warm, earthy nuances, terracotta's natural palette of colours range from light yellow tones to brick red. The colours shown represent only a few shades from our extensive range. Any custom colour shade can be created upon request.

## TERRART® LARGE

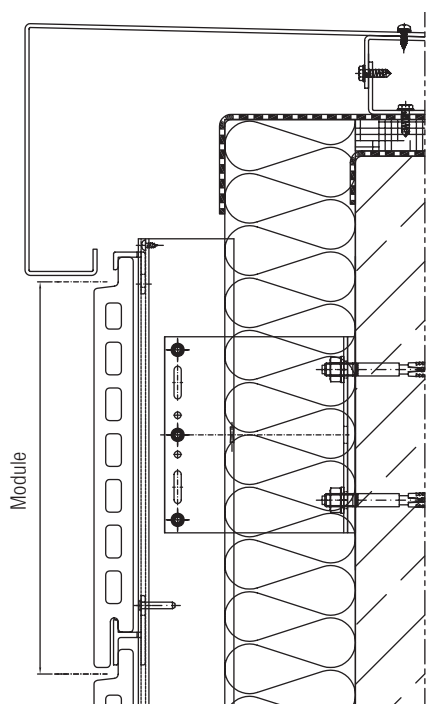


Parapet (Vertical section)

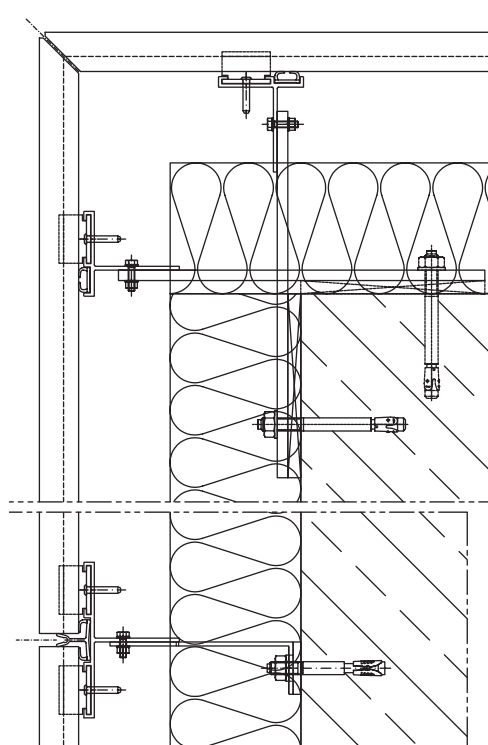


Outside Corner (Horizontal section)

## TERRART® MID

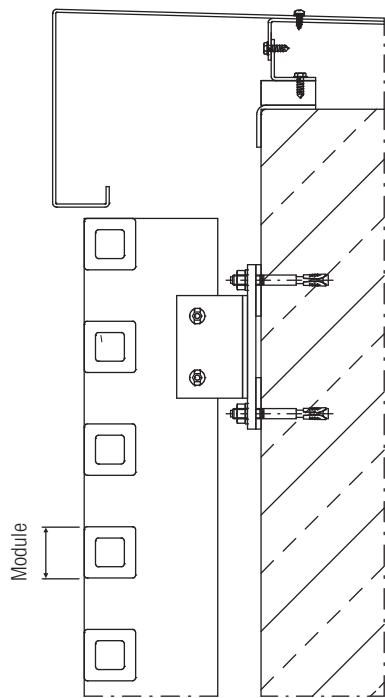


Parapet (Vertical section)

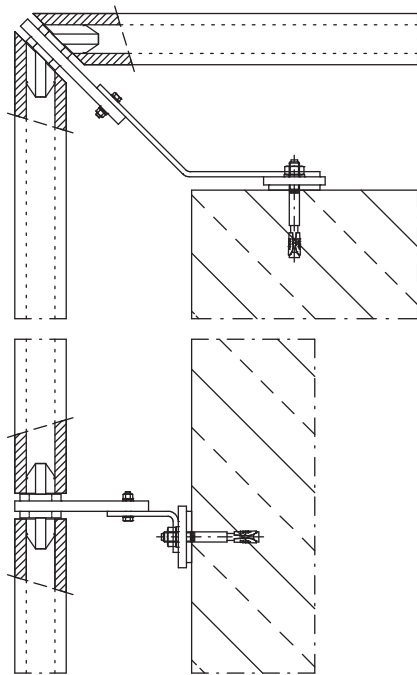


Outside Corner (Horizontal section)

TERRART® BAGUETTE

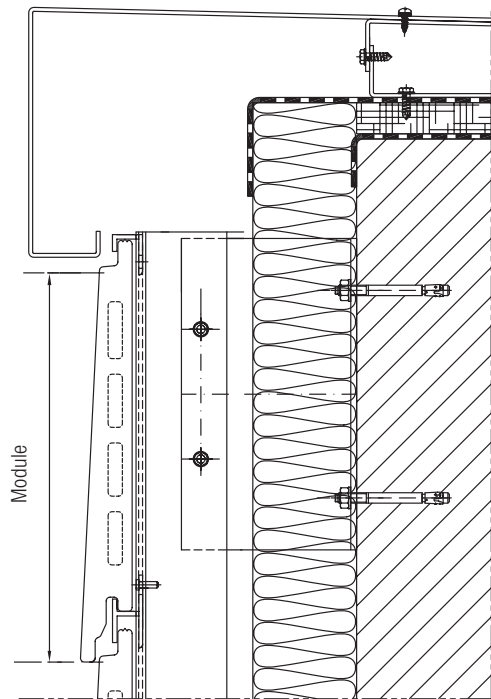


Parapet (Vertical section)

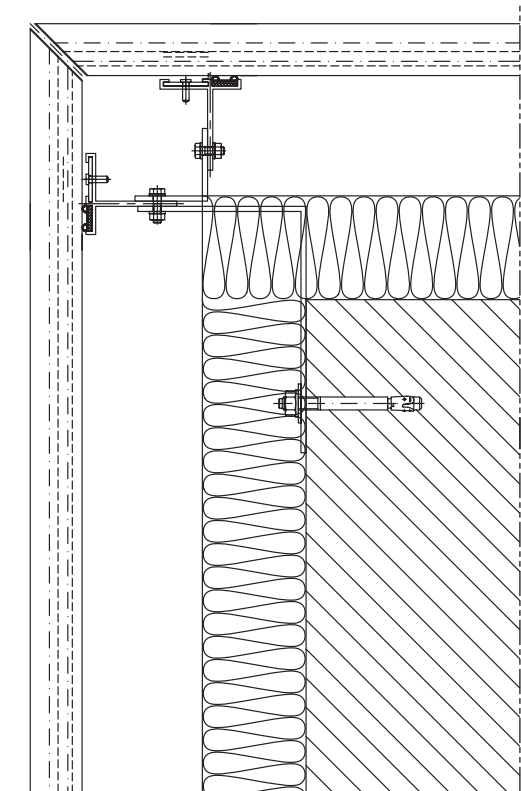


Outside Corner (Horizontal section)

TERRART® SHINGLE



Parapet (Vertical section)



Outside Corner (Horizontal section)



### QUALITY IN PRODUCTION

HunterDouglas® NBK Ceramic's demanding quality assurance applies to all of the manufacturing stages. The raw materials are inspected and carefully tested when the goods arrive prior to production and during the entire production sequence. After the firing process, the ceramics are subjected to a further inspection and compliance with tolerances are checked directly at the kiln's outlet.

Glazed elements receive a second firing, after which the glazing colour coverage and firing temperature are inspected and a laboratory assesses the dimensions and physical characteristics of the final product. In addition, TERRART® products are regularly subjected to independent monitoring by the Society for Quality Assurance and Material Testing (QsM).

### VENTILATED RAINDSCREEN FAÇADE SYSTEM

TERRART® Ceramic terracotta façade systems are custom designed and engineered based on, but not limited to, the Ventilated Rainscreen principle. With correct design and the placement of cavity closers, the system also suits the Pressure Equalised Rainscreen principle. The tile design using correct overlapping horizontal joints and a vertical carrier track support system, complete with gaskets positioned at the vertical joints directly behind the tile.

The TERRART® systems ensure control and management of any driven water, sleet or snow and allows for air flow through the open joints, which helps to balance air pressure in the cavities behind the cladding elements with that of outside air. This results in systems that maintain dry

inner wall elements and also act as a solar screen protecting the inner wall elements from extreme temperature differences, as the ventilated cavity avoids the build up of hot air.

### SUPPORT SYSTEM

The suspended construction used for the TERRART® Terracotta Façade is supported by the patented TERRART® Flex system. This system enables a concealed fixation of the façade elements and allows a three-dimensional alignment, incorporating carcassing tolerances according to DIN, to implement aesthetically suitable and modern architecture.

The aluminium substructure allows TERRART® elements to be integrated into every classic and modern wall construction. In addition, individual panels can be easily exchanged or replaced within the façade.

## PRODUCT SPECIFICATIONS

<b>Water absorption</b>	<b>EN ISO 10545 / part 12</b>	
<b>Colour:</b> Al natural, approved colours		4.0 - 7.0%
<b>Bending tensile strength</b>	<b>EN ISO 10545 / part 4</b> (replaces EN 100)	
<b>Colour:</b> 1.01-0 Arezzo white 2.01-0 Molino light yellow 5.01-0 Torrita terracotta red 6.01-0 Siena brick red		13 - 20 N/mm <sup>2</sup> 17 - 24 N/mm <sup>2</sup> 15 - 25 N/mm <sup>2</sup> 14 - 20 N/mm <sup>2</sup>
<b>Raw density</b>		2.09 - 2.20 kg / dm <sup>3</sup>
<b>Freeze / thaw resistance</b>	<b>EN ISO 10545 / part 12</b> (100 cycles)	fulfilled
<b>Efflorescence and soluble salts</b>	<b>DIN 105 / part 1</b>	well below the permitted maximum limit
<b>Chemical resistance</b>	<b>DIN 105 / part 4</b>	fulfilled
<b>Dimensions and tolerances</b>		
<b>Width</b> 400 mm to 1,800 mm	<b>Center in hole direction</b>	± 1.0 mm for cuts ± 2.5 mm for glazed tiles with glazed edges
<b>Height</b> 150 mm to 800 mm (colour M 6.01-0 and M 6.02-0 just to max. 450 mm)	<b>Opposite to hole direction</b>	± 2.0 mm to 250 mm ± 2.5 mm to 400 mm ± 3.0 mm to 600 mm ± 3.5 mm to 800 mm
<b>Thickness</b> 30, 33 or 40 mm	<b>EN ISO 10545 / part 2</b> deviation if surface is honed	± 1.5 mm
<b>Straightness in hole direction</b>	<b>EN ISO 10545 / part 2</b>	± 0.25% of length
<b>Diagonal flatness</b>	<b>EN ISO 10545 / part 2</b>	± 0.25% of diagonal
<b>Vertical flatness cross to hole direction</b>	<b>EN ISO 10545 / part 2</b>	± 1.0% of height
<b>Torsion</b>	<b>EN ISO 10545 / part 2</b>	± 0.25% of diagonal

**Remark:** The tiles are ceramics made from natural materials, so small variations in colour, size and consistency from the sample façade are unavoidable. All other formats, dimensions and special sizes are available on inquiry basis. Subject change without notice. Glazed terra cotta façade tiles and elements could show hairline cracks called Craquelé. This is a well known effect on glazed terra cotta ceramics which could appear in a short or over a longer period of time. The Craquelé will not effect any of the mechanical properties of the product. © Hunter Douglas NBK Ceramic 2012.

**HUNTER DOUGLAS** is a publicly traded company with activities in more than 100 countries with over 150 companies.



The origin of our company goes back to 1919, in Düsseldorf, Germany. Throughout our history, we have introduced innovations that have shaped the industry, from the invention of the continuous aluminium caster, to the creation of the first aluminium Venetian blinds, to the development of the latest high-quality building products.

Today we employ more than 16,500 people in our companies with major operation centres in Europe, North America, Latin America, Asia and Australia.



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*Hunter Douglas products and solutions are designed to improve indoor environmental quality and conserve energy, supporting built environments that are comfortable, healthy, productive, and sustainable.*



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FAÇADES

## ARCHITECTURAL SERVICES

We support our business partners with a wide range of technical consulting and support services for architects, developers and installers. We assist architects and developers with recommendations regarding materials, shapes and dimensions, colours and finishes. We also help creating design proposals, visualisations and mounting drawings. Our services to installers range from providing detailed installation drawings and instructions to training installers and advising on the building site.

## Innovative Products Make Innovative Projects

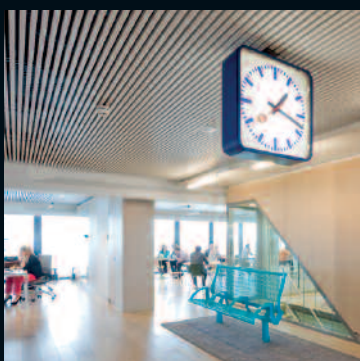


## Learn More

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