UNIQUE BRICK FACADE SYSTEM

CORIUM™
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Founded in Vienna in 1819, Wienerberger is a leading provider of wall, roof and landscaping innovations. With more than 1,000 products across our 3 product categories, we offer solutions for the whole building envelope.

In the UK, Wienerberger has 14 production sites and 6 distribution depots, with our Head Office located in Cheadle, Cheshire.

Taylor Maxwell have been providing independent façade solutions since 1959, with the company’s origins in the supply of facing brick. Today Taylor Maxwell operate from 12 locations across the UK, and distribute a wide range of Brick, Cladding and Masonry products.

Our external sales teams support construction projects from concept to completion. This involves working with clients and architects to source products which meet their expectations, both in terms of their aesthetics and their technical performance.
CORIUM is a unique brick façade system, that combines the natural beauty of genuine brick, with cost-effective fast-track installation. It offers a facing brick finish for projects where a façade system is required, rather than traditional masonry.

The CORIUM façade system is comprised of genuine brick tiles, specially designed to fix mechanically to a HPS200 galvanised steel backing section. These profiled sections are mounted in rows onto the backing structure and the brick tiles are clipped into place.

This mechanical ‘clipping’ feature is unique to CORIUM and ensures a high strength façade whilst enabling some adjustment of tile position during installation.

An innovative and versatile solution, CORIUM brings exciting new colour and texture combinations to the construction industry.

Patented in the UK and worldwide (fully industry tested and approved) you can be assured of a strong, quality finish to your building project that will last many years.

Key features
• Unique, innovative system
• Real brick aesthetics
• Saves time and money
• Flexible, functional and imaginative
• Extensive colour range
• Extensive texture range
• Industry tested and BRE certified
What are the benefits?

Robust and durable: With a HPS200 galvanised steel or Grade 304 stainless steel backing section (stainless steel below the DPC), using frost resistant brick tiles, the system has an anticipated design life of 60 years in most applications, as stated in the product BRE certificate 082/01.

Fast and simple: Building with CORIUM can be considerably faster than with traditional brickwork, and is quick and easy to install.

Versatile and aesthetic: A variety of colours and textures are available. CORIUM is designed to blend with or complement most new build or refurbishment projects.

With a variety of sizes and a range of specials available, CORIUM enables bespoke bonding patterns, without compromising performance or build time.

CORIUM may be mounted at an angle to achieve a more dynamic finish. It can also be used overhead to create soffits and ceilings. Mosaic and decorative patterns are easily achieved, adding an extra dimension to any project.

Cost effective and certified: CORIUM is suitable for use with a wide range of sub-structures, including concrete, timber-frame, structural steel, lightweight steel frames, masonry and structurally insulated panels. Due to the light weight nature of the system, CORIUM-clad buildings may also benefit from more simple, lower cost foundations. BRE certified and industry tested, CORIUM is provided as a supply and fix solution through our nationwide network of recognised installers.

CORIUM™ has UK and worldwide technical and patent approvals. GB Patent number 2331770

Designing with CORIUM™ can help to significantly reduce construction time.
The CORIUM brick façade system has recently passed a CWCT test at Wintech Engineering.

- CWCT Section 5: Air leakage
- CWCT Section 6: Water penetration
- CWCT Section 11/12: Wind resistance
- CWCT Section 7: Water penetration (Dynamic)
- CWCT Section 9: Water penetration (Hose)
- CWCT TN 76: Hard & soft body impact test
Hard impact / Soft impact / Dynamic water penetration /
**USE & INSTALLATION**

**Easy to use, simple to install**

**CORIUM** is installed by a nationwide network of recognised installers who can fix **CORIUM** from mobile platforms, scissor lifts, mast climbers or traditional scaffolding.

Through partnerships, **CORIUM** is also available as part of pre-fabricated solutions, where manufacture takes place under quality controlled, factory conditions. This allows for construction without delays due to adverse weather, reduced materials wastage and dramatically reduced site construction time. These panels are either lightweight steel frame or unitised aluminium systems and are available for larger scale projects where overall project cost savings can be realised.

**Suitability:** **CORIUM** is suitable for use with a wide variety of sub-structures including concrete, timber-frame, structural steel, lightweight steel frames and masonry, and structurally insulated panels. See pages 30-35 for technical information.

**Installation:** On a suitable structure, with vertical support at 600mm max centres, the **CORIUM** installer fixes the support rails, clips in the tiles and finishes the joints with pumped mortar.

**Strength:** Rows of profiled steel sections are fixed to the backing structure. Sections are designed to interlock vertically.

**Speed:** **CORIUM** brick-tiles are simply clipped into place. The clipping process ensures that consistent horizontal joints are achieved, whilst vertical joint spacing can be adjusted to suit design requirements.

**Simplicity:** Once all brick-tiles are installed and the quality approved, mortar is applied. The mortar is typically 1:1:6, cement:lime:sand mix, applied using a pump system. Prebagged Parex Historic KL mortar is preferred as it has been developed specifically for the system and suits the characteristics of the tiles. The preferred joint profile is bucket-handle. (please see page 5 for colours).

**Design and technical support:** We offer comprehensive, in-house technical support, including CAD and PDF typical details.

The **CORIUM** team offer detailed technical, product and design advice on the use of the system and its applications.
FINISHING TOUCHES

Specials

We offer a range of special shapes including purpose-made return units and flat arches if required.

CM.1 One piece - External return brick-tile (LH or RH)
CM.2 A Stop end brick-tile (LH or RH)
CM.1 A site bonded - External return brick-tile (LH or RH)
CM.3 Soldier brick-tile
CM.4 Air brick-tile

Arch set

The PAREX historic KL mortar range

The Parex range of advanced high specification mortars is especially formulated for CORIUM.

<table>
<thead>
<tr>
<th>Color Code</th>
<th>Color Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>EA250</td>
<td>Sandstone</td>
</tr>
<tr>
<td>EA253</td>
<td>Natural</td>
</tr>
<tr>
<td>EA254</td>
<td>Mid Brown</td>
</tr>
<tr>
<td>EA255</td>
<td>Light Grey</td>
</tr>
<tr>
<td>EA256</td>
<td>Mid Grey</td>
</tr>
<tr>
<td>EA257</td>
<td>Dark Grey</td>
</tr>
<tr>
<td>EA262</td>
<td>Bathstone</td>
</tr>
<tr>
<td>EA263</td>
<td>Brick Red</td>
</tr>
<tr>
<td>EA264</td>
<td>Light Brown</td>
</tr>
<tr>
<td>EA265</td>
<td>Dark Brown</td>
</tr>
<tr>
<td>EA266</td>
<td>Dark Red</td>
</tr>
<tr>
<td>EA288</td>
<td>Charcoal</td>
</tr>
</tbody>
</table>

For further information on recognised mortar installers, please contact us.

CORIUM™ has UK and worldwide technical and patent approvals.
The building envelope of Belmont House, originally a 1980’s office block, has been re-clad with circa 2500m² of CORIUM brick façade, using a unique four colour blend of tiles to achieve the client’s desired finish, and facilitate the modernisation of the previously dated design.
Over the last 2 years, circa 5000m² of CORIUM has been supplied to a number of new and refurbished NEXT stores across the UK.

The retailer required a fast track brick façade system due to time restricted build programmes. CORIUM was chosen for its speed and simplicity when compared to traditional building methods, and the lightweight and easy-to-install nature of CORIUM allowed installation to take place from scissor lifts rather than scaffolding.
Central Square

Client — Roydhouse Property Developments Ltd
Architect – DLA Architecture
Main Contractor – Wates Construction
Installer – McMullen Facades Ltd

The window columns on the Wellington Street aspect of this development were clad using the CORIUM façade system, in a traditional red coloured brick, that would blend in with the existing architecture in the immediate vicinity of Central Square.

The column units were manufactured and clad off-site in Ireland and pre-pointed in a local factory in Leeds, after which the completed units were craned onto the buildings facade. Manufacturing the units as a pre-fabricated solution, under quality controlled factory conditions, allows for construction without delays due to adverse weather conditions, reduced materials wastage and dramatically reduced site construction time.
The formerly tired and dated Hercules House, originally a 1960’s government office building, was best known as the home of the now-defunct Central Office of Information. It has recently been given a complete makeover and transformed into a four-star hotel; Park Plaza London Waterloo.

A bespoke blend of CORIUM colours were developed to enhance the building’s elevations, whilst remaining sympathetic to the local surroundings.

As part of the design brief, the architects wanted a brick façade system that could be pre-fabricated off-site in manageable sized panels, enabling a quick install on site.
Hilton

Client — Hilton Hotel
Architect – Dexter Moren Associates
Main Contractor – Synergy Hotels
Installer – IGP Management

As Hilton’s first hotel in central London since 2006, the brief was to combine the quality associated with the luxury brand, with references to the site’s urban location and industrial past.

The building’s façades are clad in a light-coloured CORIUM brick tile, in keeping with the traditional local London stock brick, that pays testament to the industrial environment that existed on the site some 80 years ago.

The use of the CORIUM brick façade system was an ideal solution for this scheme, as it provides a high-quality brick aesthetic that the design brief desired, whilst remaining cost-effective.
Shakespeare House in London illustrates a unique conversion of a 1930s four storey residential building, that was of a poor quality with inadequate living areas. The original, dated external walls have been over-clad with CORIUM brick façade system, with a complete change in colour from traditional yellow stock facing brick to contemporary sleek black CORIUM brick tiles.
Almost 9000m² of the CORIUM brick façade system has been used on this development across a series of public squares, refurbished heritage buildings, commercial spaces and residential units, that has transformed the west end of Chelmsford and created a brand-new gateway to the city.

The brick cladding façade system has been installed in both vertical and horizontal orientations, achieving a façade that could not be achieved using a standard facing brick. The development’s façade has been aesthetically enhanced through the use of large format glazed tiles.
Carlow House

Client –  Galliard Homes
Architect –  Buckley Gray Yeoman
Main Contractor –  Galliard Homes
Installer –  Labour only

Carlow House is a new London landmark for luxury loft-style living, set in a converted Edwardian warehouse. An exposed brick wall finish has been achieved internally with the CORIUM brick façade system, which creates an intriguing blend of natural beauty and industrial design. A bespoke three brick blend was produced to match a traditional facing brick and integrate effortlessly with the character warehouse appeal.
The Ritterman Building

Client — Middlesex University
Architect – BPR Architects
Main Contractor – Interserve
Installer – Domus Facades

The cost-effective and fast-track installation of the CORIUM brick façade system was an ideal solution to satisfy the University’s requirements to complete building works safely and deliver a quality project, in-line with the strict timetable of the academic year.

Three shades of glazed green CORIUM tiles were selected to clad the exterior, complement the feature living wall, and highlight the BREEAM excellent ‘green’ credentials of the new teaching block.

Differing bond patterns have been utilised to add additional interest to the building’s façade, with a standard stretcher bond to the lower levels and stack bond at the windows.
Paxton School

Client — The Mayor & Burgesses of the London Borough of Lambeth
Architect – Paul Murphy Architects
Main Contractor – Extraspace Solutions (UK) Ltd
Installer – Extraspace Solutions (UK) Ltd

One of the main factors driving the design solution for the new Paxton Primary School, was the importance of the facility remaining open and fully operational throughout the construction period. This made the CORIUM brick façade system an ideal solution for this project. The fast track installation of the system meant that school could be completed much sooner than traditional methods would have allowed, and greatly reduced the overall school build time to less than 6 months.

The school has been clad with a simple palette of CORIUM colours to maintain continuity throughout the site, however non-standard double-thick CORIUM tiles have been used to create a stunning protruding brick facade feature that provides interest and depth to the tall elevations.
The entrance building for the performing and visual arts centre at Loughborough College has transformed the public gateway to the facility.

The students, staff and visitors are now greeted with views of a curved brick façade that features 15 different colours of CORIUM. The system was selected to replicate the spines of thousands of books within the first-floor library. CORIUM was installed in stack bond, with the whole brick façade appearing to change in colour as the sun passes each day.
Supply & fix

To achieve the best solution and to ensure the most cost-effective approach, we recommend contacting us at an early stage on your project, so that we can provide the maximum technical input.

<table>
<thead>
<tr>
<th>property</th>
<th>result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal weight of system including mortar</td>
<td>68 kg/m²</td>
</tr>
<tr>
<td>Resistance to wind loading and wind driven rain (BS 6375)</td>
<td>Exposure class 2000</td>
</tr>
<tr>
<td>Impact resistance (UEAtc MOAT 43: hard and soft bodies)</td>
<td>Class E3 (performance)</td>
</tr>
<tr>
<td></td>
<td>Class E2 (safety)</td>
</tr>
<tr>
<td>Water vapour transmission resistance</td>
<td>8.5 MNs/g</td>
</tr>
<tr>
<td>Frost resistance of brick clay tiles (EN:771)</td>
<td>F.2</td>
</tr>
<tr>
<td>Racking deflection</td>
<td>System retains high integrity with structure deflections of h/300</td>
</tr>
<tr>
<td>Nominal tile face dimension</td>
<td>215 x 65mm</td>
</tr>
<tr>
<td>Tile size tolerance</td>
<td>Mean of 10 between 213 and 217mm</td>
</tr>
</tbody>
</table>
Foundation detail

- Self drilling fixings to suit stud and insulation specification
- Cavity formed using galvanised steel 'top hat' or 'Z' sections
- Rigid insulation board with taped joints (provides vapour barrier)
- Corium tile
- HPS200 Corium rails above DPC level
- Optional DPC
- Stainless steel Corium rails and fixings below DPC level
- Damp proof coating to underside of insulation
- Insulating blockwork
- Foundation

Internal finishes
Insulated steel frame
Concrete slab
DPM below concrete slab
Window section - Trimmed reveal

- Standard Corium tile
- HPS200 Corium rails
- Insulated steel frame
- Cavity formed using galvanised steel 'top hat' or 'Z' sections
- Internal finishes
- Soldier brick-tile (CM.3) or 3 courses of standard tiles
- Rigid insulation board with taped joints (provides vapour barrier)
- Lintel trim
- Window reveal depth varies
- Self drilling fixings to suit stud and insulation specification

Job Title: Typical Details

Drawing No: CM-SF-02

Drawing Title: Window Section - With Reveal

Issue date: 09/08/2013

Revision: -

Scale: 1:5 @A4

Drawn: MF
**Horizontal movement joint**

- Self-drilling fixings to suit stud and insulation specification
- HPS200 Corium rails
- Corium tile
- Corium tile fixed with epoxy adhesive
- Corium rail adjusted to allow gap for movement
- Mastic sealant
- Rigid insulation board with taped joints (provides vapour barrier)

**Vertical movement joint on timber frame**

- Corium tile
- HPS200 Corium rails
- Flexible filler with mastic sealant
- Cavity formed using timber battens
- Breather membrane
- Insulated timber frame
- Vapour control layer
- Internal finishes
Side section stack bond

Fastframe system

Horizontal tophat

Vertical L/T rails

CORIUM system (stack bonded)
Vertical running CORIUM trays
Fixing pattern

- 2400mm Corium rails
- Typical support centres
- Position of fixings to perimeter
- Staggered fixings
- Maximum fixing centres
COLOURS

Plain colours

white 31100
10100
6026
2327
12000
13010
12280
120
23500
25600
29180
2330
2332
2313
2314
2311
10090
61070
63000
93801
74010
73210
74117
1. Please use the reference numbers for initial sample selection.
2. To ensure excellent size consistency and a secure fit onto the rails, CORIUM tiles are produced with a red body. Extremely durable colours or glazes are fixed into the surface during firing at over 1000°C.
note: 1. Please use the reference numbers for initial sample selection
2. To ensure excellent size consistency and a secure fit onto the rails, CORIUM tiles are produced with a red body. Extremely durable colours or glazes are fixed into the surface during firing at over 1000ºC
Blue & grey multis

note: 1. Please use the reference numbers for initial sample selection
2. To ensure excellent size consistency and a secure fit onto the rails, CORIUM tiles are produced with a red body. Extremely durable colours or glazes are fixed into the surface during firing at over 1000°C

Special blends

St Ambrose

Hassocks
CORIUM FAQS

Q. What is CORIUM?
A. The system comprises interlocking steel sections (rails) specially profiled to allow fired clay brick tiles to be clipped in, providing a mechanical fix. The vertical and horizontal joints between the tiles are then pointed to provide a brickwork finish.

Q. What tile sizes are available?
A. The standard tile has visible face dimensions of 215 x 65mm to match standard UK brick size. Alternative tile heights of 50mm, 57.7mm, 140mm and 215mm are available. Tile length can vary (depending on tile height) up to 327mm. The maximum possible tile size is 215mm (H) x 327mm (L). All tiles have a thickness of 32mm.

Q. Are corner tiles available?
A. Yes. One piece external returns (215 x 102mm) or cut and bonded corners.

Q. What fixings should be used and at what centres?
A. Austenitic stainless steel fasteners (304 grade) with integral sealing washer (EPDM or similar) should be specified to suit the support material to which CORIUM is being fixed. The system is fixed to vertical supports at maximum 600mm centres.

Q. What mortar specification should be used?
A. Historic KL Mortar by Parex was developed specifically for use with CORIUM and its use is recommended. The pointing and mortar mixing must only be carried out by approved CORIUM installers.

Q. Can the tiles be matched to a specific brick type?
A. CORIUM has a specific range with no direct equivalent in traditional brick. Colours, glazes and textures are applied and fixed into the surface of the tiles during firing. The CORIUM brochure shows a range of finishes but other colours and finishes can be developed.

Q. What is the weight of the system?
A. The CORIUM system (tiles, rails and mortar) has an overall weight of approximately 68kg/m².

Q. Can the system be installed vertically or at an angle?
A. Yes. The performance of the system is not affected by its orientation.

Q. Can Corium be used for soffits?
A. CORIUM has been used successfully many times for soffit applications. We have also developed a corner tile which allows the continuation of the system from wall to soffit.

Q. Can the system be used for curved walls?
A. If the radius is over 22m then curves can be easily achieved. For smaller radii the rails need to be cut into shorter sections or installed vertically.

Q. What is the maximum height that CORIUM can be used?
A. CORIUM can be used where the maximum design wind load does not exceed ±2 kN/m².

Q. Are movement/Expansion joints required?
A. Vertical movement joints to allow for horizontal movement should be provided through tile, mortar and steel sections at 10 to 12m centres in the brick cladding. They should extend throughout the full height of the building including parapets etc. Movement joints in the structure of the building should be carried through to the face of the cladding. Horizontal joints to allow for vertical movement should be provided at maximum 9m centres generally and more frequently in timber framed structures.

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Q. What is the weight of the system?
A. The CORIUM system (tiles, rails and mortar) has an overall weight of approximately 68kg/m².

Q. Can the system be installed vertically or at an angle?
A. Yes. The performance of the system is not affected by its orientation.
To date we have manufactured the following height tiles:

- 50mm
- 57mm
- 65mm
- 140mm
- 215mm

For lengths please consult our technical department.
We offer a standard range of both matt and gloss glazed finishes.
CPD

BRICK FACADE SYSTEM CPD available

Please email: seminars@taylor.maxwell.co.uk
or call 0203 794 9377