



BRICK SLIP (NON COMBUSTABLE) MECHANICAL FIX CLADDING SYSTEM

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Brictec - Safe – Secure - Simplistic

Brictec Introduction

Brictec is the UK’s most simple fast and straight forward mechanically fixed brick slip system on the market to use with real Clay Bricks! Metric, Imperial or Reclaimed and contains no combustible parts. The system is designed to provide substantial cost savings compared to similar systems and delivers the flexibility and aesthetic appeal of real brick in a fraction of the time.

Brictec’s mechanically fixed brick slip tile system is on galvanised steel rainscreen rails secured to a support system or fixed to the structure of the building.

Where to use Brictec

The system is ideal for either exterior or interior applications as a lightweight solution for cladding.

Use Brictec for: Modular – ICF – SIP Build

- Steel frame
- Concrete frame
- Wooden frame
- Brickwork / Blockwork
- Dense concrete blockwork (minimum 1450 kg/m3)
- Lightweight steel framing
- Brictec’s Steel top hats
- Brictec’s Z cavity system brackets
- Brictec’s Envelope System
- Existing masonry
- Lay Brictec’s Slips Upside Down, Vertical and Horizontal



Brictec’s Slips come in three sizes 20mm - 30mm or 40mm

Please check suitability of Brictec for your project with one of our Advisors. 01926 935 147



Britec's Mechanical Fix Brick Slip / Tile System "The Sky's the Limit"

20mm, 30mm or 40mm Clay brick slips, to blend into any existing brickwork
Fully mechanically secured brick slips.
Pre-spaced mortar bed joints.
Compatible with a range of construction methodologies.

Brictec has applied for ISO 14001 accreditation.



Brictec Installation Guidance Overview

Masonry substrates - Mechanically fix vertical support rails to the building

Fix Steel frame -Mechanically fix level starter horizontal rails to framework prior to affixing slips & middle rails.
substructure using brackets supplied up to 600mm maximum centres.

Ensure the starter rail is affixed at the base of the elevation and level.

Ensure the middle rails are the correct orientation and fitted into top groove of slip. Then repeat the process until wall is complete staggering the start rail from the starting side, Complete the elevation with the top capping rail for a neat finish.

You can fix all brictec rails to all vertical rails at 30mm/40mm or 60mm vertical centres.

Slot Brictec brick slips firmly into place, guided by the pre-formed upper groove



When installation is complete simply injection point with mortar to realise a classic clay brick finish.

Brictec Specification, Handling and Laying Guidelines (De-Skilled)

1. Product Specification

A non-loadbearing external cladding, fixed back to provide weather protection to an inner leaf, drained and back ventilated, suitable for both new build and refurbishment projects.

1.1 System Composition Brick Slip

Clay facing bricks of any face size format can normally be accommodated. Bricks are cut to a 30/40mm thickness and pre-cut grooves in each slip are set back approximately 13mm from the top of the unit and 13mm at the bottom in order to sit on the support rails.

The narrower 10mm slip front should face outwards.

Standard bricks are 215x 65mm however Imperial, Reclaimed, Stone or Linear sizes can be used with Brictec's system

Pointing Mortar

You have a large choice of mortars from sand and cement (to match existing brickwork) or we can recommend various colours.

Support System

Galvanised Steel slip support rails can be affixed either directly to the substrate, or to vertical support batons fixed back to a masonry substrate by means of wall brackets.

For steel frames/envelope system, dependent on SFS stud centres, additional horizontal 'top hat' rails will be needed to fix support rails back to the substrate.

Fixings

All system fixings should be stainless steel.

Rail/mullion fix screws, thermal pad and fixing screws and bracket/wall fix screws are supplied where necessary.

Fixings, brackets and support rails can be supplied by Brictec. The quantity calculated on an individual project by project basis.

1.2 Sizes and Weights

Vertical support rail lengths: 3 metres available.

Starter / capping rail lengths: 3 metres

Middle rail lengths: 3 metres
Top rail lengths: 3 metres

Brick slips typically 215mm x 65mm x 28mm x 20mm brictec slips weigh approximately 36kg per m².

Brick slips typically 215mm x 65mm x 28mm x 30mm brictec slips weigh approximately 48kg per m².

Brick slips typically 215mm x 65mm x 28mm x 40mm brictec slips weigh approximately 60kg per m². Cut slips for corners, sills and rebates are available which can increase individual slip weights.

Pointing mortar weight approximately 5kg/m² System Weight approximately 51.5kg/m²

1.3 Thermal Conductivity

The average thermal conductivity (k value) for clay brick slips is 0.71W/mK.

2. Substrates

Brictec is intended to be used as a cladding system and is not self-supporting.

Ensure the substrate is robust enough to support the envisaged weight.

Brictec is suitable for new build construction and for renovating existing structures, and is suitable to be fixed to the following materials:

- Existing brickwork
- Existing concrete
- Existing blockwork
- Modular
- Wooden Buildings
- System is available with 20mm, 30mm or 40mm slips
- Lightweight steel studs
- New build blockwork
- Steel Frames



3. Setting Out

Brictec Advisory Service can assist in project design and specification, with onsite training if required.

For masonry substrates vertical support rails are normally mechanically fixed to the building substructure at 600mm maximum centres.

Middle rails are horizontally fixed to the vertical supports at 75mm increments, including a starter and top rail in their respective locations. Steel adjustable wall bracket adjustment range 3 metres

Brictec brick slips are slotted firmly into place, guided by the pre-formed upper and lower retainers.

Avoid short lengths of horizontal support rails at external returns. Keep any cut lengths between full rail lengths if possible. Refer to for steel or timber frame.

4. Movement 5.1 Existing Structures

Movement provision in the Brictec system should be provided at 6m centres vertically and horizontally. Leave a 10mm gap between horizontal rails, for pointing mortar.

5. New Build Structures

Where Brictec is applied to new build masonry, vertical movement joint spacing for the masonry should be in accordance with BS EN 1996 and PD6697. Movement provision in the Brictec system should be provided at 6m centres vertically and horizontally.

Where Brictec is applied to new build stud frame, the Brictec system should be provided at 6m centres vertically and horizontally.

6. Cutting on Site

Also refer to section 10.4 COSHH.

If brick slips require cutting down to shorter lengths it is recommended to wet cut using a water fed angle grinder or chop saw and wear a suitable face mask when cutting.

Galvanised Steel rails are likely to require cutting to size and can also be cut using an angle grinder or metal chop saw.

Wear suitable eye and hand protection when cutting.

Suitable ear defenders should be worn by everyone in the vicinity of mechanical cutting machines.

7. Pointing

The recommended mortar for pointing the Brictec system is Dependent upon specifier's choice of mortar colour.

Bucket Handle joint profile is recommended, however for certain products a slightly recessed joint, no more than 3mm, may be more aesthetically suitable.

Follow the mixing guidelines supplied on the packaging, allow sufficient curing time.

8. Cleaning

Additional information is contained within BS8221-1, which refers to general cleaning of building materials with a useful reference on brick masonry repair, and also BDA Note 2 on cleaning of brickwork. Take care if considering acidbased cleaners as this may adversely affect any bare galvanised steel.

9. Health and Safety

The Health and Safety at Work Act, Consumer Protection Act and other legislation require us to provide relevant information regarding our products in respect of handling, processing, storage, transportation or disposal without risk to health.

9.1 Handling and Storage

The use of personal protective equipment (PPE) is strongly recommended whenever practicable, to minimise the risks associated with falling objects and sharp edges.

Brictec components may be grouped together into packs. Care should be taken in their handling. Equipment used for lifting

packs must be adequate for the weight involved. The weight of the pack varies according to the content. These packs are delivered on disposable wooden pallets and are contained by plastic shrink-wrap.

All personnel involved in the handling of packs should be made aware that shrink-wrap and banding straps contain the products and tilting of the pack could allow the products to fall:

AVOID abnormal shocks to the packs, AVOID sliding one pack against any face of another pack NOTE packaging can deteriorate over a period of time.

Packs should be placed singly on dry, level ground.

Any pallets supplied by the client to store or transport packs must be very close in size to the pack dimensions and must be of adequate strength to support the weight of product placed on it.

9.2 On Site Handling

To lift pallets by a mobile fork truck, only use the holes in the pallets provided. "Side grabs" should not be used to lift packs from the lorry. Do not move opened packs of stacked units around site. Ensure units are laid flat.

Where packs are lifted more than 1 metre above ground level, a safety cage of adequate dimensions around the pack should be used. All personnel must stand well clear of packs when they are being lifted or moved.

If it is considered necessary to store a pack above ground level, it should only be placed on a suitably designed staging with guard rails of appropriate height to prevent any components falling to lower working areas.

9.3 Disposal of Packaging

Redundant packing materials should be gathered together daily and placed in waste disposal skips for removal to an approved tip. The burning of any packaging materials is not normally permitted on sites; some plastic materials may give off harmful fumes. If permission is granted for the burning of wooden pallets great care must be exercised to ensure that environmental pollution controls are not contravened.

9.4 COSHH

Brictec brick slips and carrier rails will require cutting on site. If powered tools are used to cut this product, amounts of dust may be produced.

Depending on the environment and the method of cutting, it is possible that some respirable silica may be generated from the brick slips. The main effect in humans of the inhalation of respirable silica dust is silicosis. There is sufficient information to conclude that the relative lung cancer risk is increased in persons with silicosis. Therefore preventing the onset of silicosis will

also reduce the risk of cancer. Since a clear threshold for silicosis development cannot be identified, any reduction of exposure will reduce the risk of silicosis.

Under the COSHH Regulations, the Workplace Exposure Limit (WEL) for respirable silica is 0.1mg/m³ (from October 2006). The only reliable way to ascertain the levels of individual exposure during cutting is to carry out detailed personal monitoring. Flammable dust may be generated from cutting aluminium. The use of water fed cutting equipment is recommended to minimise dust generated by cutting operations

Dust may cause skin irritation, wear suitable gloves and barrier cream to avoid abrasion.

Wear eye protection and ear defenders when mechanically cutting materials.

Brictec components are manufactured in the UK from naturally inert materials and are not prone to off-gassing of volatile materials. Clay products are non-toxic and acquired from all brick manufacturers.

9.5 Manual Handling

Repetitive handling of any product including brick slips can give rise to upper limb disorders such as muscular strains and sprains. Specialist help should be sought for anyone involved in this type of work.

IT IS THE CUSTOMERS RESPONSIBILITY TO OBTAIN TECHNICAL DATA ON ALL MATERIALS TO BE USED WITH BRICTEC PANELS. NO LIABILITY CAN BE ACCEPTED IN RESPECT OF OTHER MATERIALS USED IN CONJUNCTION WITH THESE PRODUCTS.

10. Damage

Repairs; In the unlikely event of damaged or broken slips, they can be easily replaced by carefully removing mortar pointing around the slip, take out damaged slip, extend the depth of top groove by 5mm and it will slot in then re point.

Damage to the horizontal supporting rails may require removal of a section of slips to remediate. Unbroken slips may be able to be re-used.

11. Maintenance

The Brictec system requires little or no maintenance. Check mortar pointing at 5-year intervals as part of a maintenance review.

12. Recycling

Despite the potential longevity of fired clay products, they are sometimes demolished well before the end of their useful life.

The following are possible uses for recycled clay building materials:

- Reclaim and re-use.
- Filling and stabilising material for infrastructure works.
- Aggregates for in-situ and precast concrete and mortars.

The majority of the galvanised steel used in carrier and support rail extrusions can be recycled by a licenced company.

'Adaptable Building' is used to describe a structure that has the ability to be modified or extended at minimum cost to suit the changing needs of the people using the structure. Thoughtful design can provide the flexibility for these needs to be met without requiring expensive and energy intensive renovations. The ease of assembly and disassembly of the Brictec system components means a structure can be re-shaped or extended incorporating the re-use of the Brictec system.

BRICTEC WARRANTY DETAILS

Brictec provides a durability warranty of 40 years on Brictec Brick Slip Cladding Panels subject to correct installation. This excludes the supporting masonry, See Warranty Below.

Brictec –Testing

Introduction

The Brictec System is totally Non-Combustible - Fire Proof, rated F1, awaiting Reaction to Fire Results (BTSE) The Brictec system has been tested for wind resistance, water tightness and impact resistance. and tested the weatherability of the system.

Materials

Fired clay brick slips supported by Brictec's galvanised steel rails.

Test Programme

The test programme was carried out with results as follows, by Building Trade Structural Engineers

Wind Resistance – serviceability and safety

BTSE testing achieved ±2400 Pascals serviceability, ±3600 Pascals safety. PASS

Water Tightness –dynamic pressure

BTSE testing achieved 600 Pascals - PASS

Impact Resistance

BTSE Soft and hard body impact tests - testing achieved Class 1 serviceability, negligible risk safety. PASS.

BTSE Weatherability Tests

Hygrothermal testing to ETAG 034. PASS

BTSE Freeze/Thaw Resistance

Freeze Thaw testing in accordance with ETAG 017

BTSE additional freeze/thaw resistance test is carried out in accordance with the European method DD CEN/TS EN77222, which involves subjecting a panel of brickwork to repeated free thaw cycles designed to simulate naturally occurring conditions. From

the results, the bricks were classified as F2 i.e. suitable for use in conditions of severe exposure, in accordance with BS EN7711, Specification for Clay Masonry Units

Additional Testing

Fire cavity barriers are not included within the Brictec system and should be specified and designed by a qualified engineer.



Brictec Mechanical Brick Slip System uses all Manufacturers Bricks and Colours
20mm, 30mm or 40mm Clay brick slips, to blend in with any existing local brickwork

Brick Slip Data Sheet

Manufactured to BS EN 771-1	Water Absorption
Brick Type	<13%
Category 11, HD, Masonry Unit	Durability
	F2
Standard Work Size	Active Soluble Salts Content
215 x 1025 x 65mm	S2
Dimensional Tolerances	Configuration
Tolerance Category: T2	Frogged 8-18% Voids
Range Category R1	Dry Weight per Brick
Compressive Strength	2.20kg
>25N/mm2	BES 6001

Galvanized Steel Data Sheet

1mm Galvanised Sheet			Chemical Composition	
Mechanical Properties				
Steel base	Guaranteed	Typical Range	Guaranteed Maximum	Percent
Longitudinal tensile			Carbon (C)	0.25
Yield strength, minimum ksi	80	80-117	Phosphorus (P)	0.04
Tensile strength, minimum ksi	82	82-120	Manganese (Mn)	1.35
Elongation in 2 inches, minimum %	-	-	Sulfur (S)	0.04
Hardness, HRB	-	85-99	See ASTM A 653 for more details	
Supply Condition	Standard	Optional	Fabricating Performance (1-Limited to 5-Excellent, NR-Not Recommended)	
Coating class	G90	G30, G40, G60	Bending	2
Tension leveling	Leveled		Drawing	NR
Surface conditioning	Not Skin-passed	Skin passed, (paint line feed)	Pressing	NR
			Pittsburgh Lock Seam	NR
			Roll-forming	4

How it works, the system works with brick slip-cutting technology (patent pending) that allows the vast majority of stock, wire cut and Waterstruck bricks to be mechanically fixed into horizontal rails at flexible heights. This means that linear metric, reclaimed and low-profile bricks can be used. Bricks can be arranged in desired bond patterns, and mortar is applied via a mortar gun.

Commercial benefits! This system offers significant advantages associated with rainscreen cladding, including reduced installation times and associated costs. Its ability to deliver a truly desirable finish sets the Brictec system apart from its competitors and will be widely welcomed by architects and specifiers.

Brictec responds to many of the challenges faced by contractors and specifiers. For example, installation is possible from towers, thereby removing the need for scaffolding and the associated costs. Crucially, deployment of Brictec can also reduce contractors' reliance on skilled trades at the installation phase. With UK construction labour shortages, a known issue, such an easy, fast installed design system will bring commercial advantages to all installers.

The Twin Track brick slip cladding system is a great innovation. The galvanised steel rail is uniquely designed, the raised tracks give flexibility to the steel system when used on walls of any height. With the Knowledge that it is Secure unlike Slips held on with Adhesive. The steel track also adds strength when fixed to the substrate, acting like a steel brace to the wall. Brictec's 20mm-30mm & 40mm thick 100% clay brick slips are made from any Clay Brick, Metric, Imperial and even Reclaimed to match any existing buildings, with top and bottom grooves, the slips are placed on the galvanised track, no glue or adhesive is required. Just add mortar to the joints after installation.

The brick cladding system is Designed to be used on any Modular or Traditional Building, and idea for Steel, Wood, Block and Damaged Substrates

For more information, please contact Brictec at sales@brictec.co.uk– 01926 935 147

The End.

BRICTEC

The Ultimate Brick Slip Mechanical Fix
Brick Slip Insulated and Cement Partical Board Panels
A1 Fire Safe Brick Slip Cladding Systems



Cedar Hall School London, We Built Up two floors with steel then Fixed our system to an SFS