



**SOLTHERM DECO W BRIQ**  
Soltherm EWI system on MW  
with traditional  
brick slips & stone slips

**APPLICATION GUIDE**



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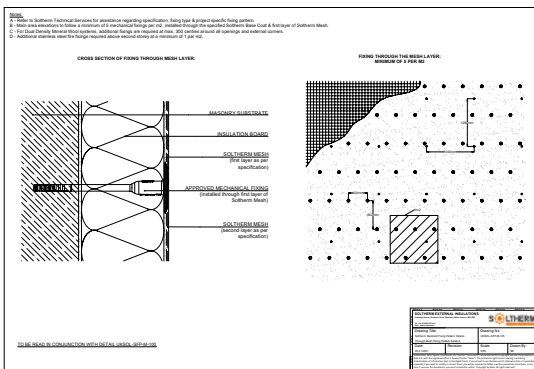
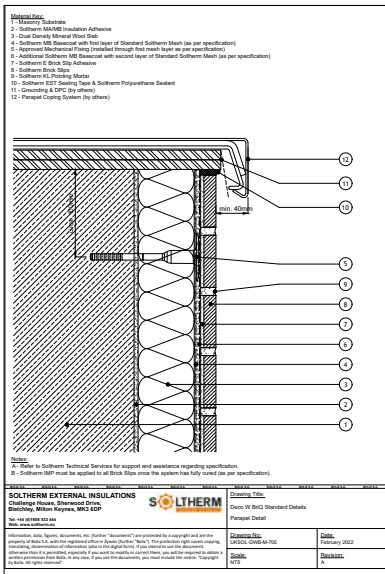


# INTRODUCTION

This application guide is designed for use by qualified and Soltherm registered installers, who already have an extensive knowledge of external wall insulation (EWI) install techniques.

Soltherm Deco W BriQ system utilises an A1 non-combustible mineral wool insulation slab. The system achieves a fire rating A2-s1, d0 with compliance for use on high rise projects anywhere in the UK. Soltherm Deco systems provide designers with unparalleled architectural freedom through a diverse range of finishes, textures and colours. All systems have low water absorbency, which protects against the penetration of wind-driven rain, dirt and destructive chemicals within the atmosphere, also preventing failure via freeze-thaw processes.

Of equal importance is vapour permeability and durability, allowing the system to breathe whilst protecting the system from day to day damage with a high level of impact resistance offered.



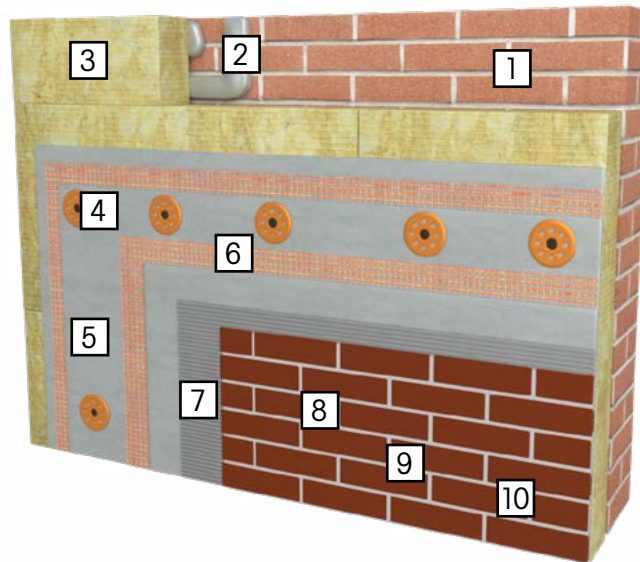
## Important information

Prior to commencing with the installation of the Soltherm Deco W BriQ systems, the Soltherm Registered Contractor is required to ensure the following;

- The installation team have had Soltherm Deco W BriQ training.
- A non-draught project specification has been issued by Soltherm with fixing pattern and any unique detailing requirements.
- Datasheets of all the Soltherm materials are readily available and guidelines contained within are adhered to in relation to application, preparation and health and safety (H&S).
- The Contracts Administrator has confirmed that the substrate is structurally suitable to carry the EWI system and any structural repairs deemed necessary have been completed to required specification.
- Scaffold and/or access is in accordance with all H&S requirements.
- Enabling works have been completed to a satisfactory standard.
- Windows, walkways, driveways and other features are protected from damage.
- Requirement for mechanical fixing pull out tests
- Wind load calculations
- Define expansion joints, if required. The purpose of expansion joints is to mitigate stress, particularly in areas with rectangular openings in the facade, geometrically varied facade areas, or when one side of a field is significantly longer than the adjacent side. Expansion joints also serve to compensate for thermal stresses in EWI system. It is recommended that the brick slips finish surface be divided into smaller fields, no larger than 36 square meters, preferably squareshaped, with sides no longer than 6 meters.



# THE SYSTEM



## DECO W BRIQ

### 1. SUBSTRATE

SOLTHERM Deco W BRIQ system must only be utilised on masonry substrates. The substrates must be clean, dry and primed prior to the application of the system.

### 2. SOLTHERM MA

A1 Insulation adhesive designed specifically for use with mineral wool insulation.

### 3. MINERAL WOOL INSULATION

A1 insulation utilising monodensity or doubledensity mineral wool boards, providing improved fire resistance and thermal performance.

### 4. MECHANICAL FIXINGS

ETA approved screw-in or hammerset fixings with steel nails are used. Refer to Soltherm standard details as well as fixing pattern implemented in the specification. Stainless steel fixings (fire fixings) only required above second storey to be installed through 1st layer of reinforcing coat.

### 5. SOLTHERM MB or SOLTHERM UB Special

A1 basecoat designed to encapsulate the reinforcement mesh, providing the system with water resistivity, breathability and impact protection.

### 6. SOLTHERM GLASS FIBRE MESH

An alkali resistance reinforcement mesh bedded into the base coat providing increased flexibility, durability and impact resistance.

### 7. SOLTHERM E or SOLTHERM SE

Flexible brick slip adhesive designed to provide improved adhesion & reduced slumping properties.

### 8. BRICK SLIPS / STONE SLIPS

Decorative brick slips & stone slips offering a diverse range of colours and textures, compliant with ETA & NSAI certificates.

### 9. SOLTHERM KL
















Polymer modified pointing mortar designed to provide increased cracking and frost resistance.

### 10. SOLTHERM IMP (if required)

Hydrophobic coating designed to provide additional protection and stain resistance, ultimately improving the system durability.

# SYSTEM COMPONENTS & MATERIALS

**IMPORTANT: When using any component, product or material, refer to the technical datasheet before proceeding with the installation.**

<b>FUNGICIDAL WALL WASH</b>	A concentrated biocide for cleaning masonry walls	5L Bottle	Diluted with clean water in accordance with the datasheet. The level of dilution will depend on the severity of the fungal growth on the wall.	
<b>SOLTHERM SP</b>	A substrate primer for absorptive substrates	10kg Bucket	Applied directly to the masonry wall by brush, roller or low pressure spray.	
<b>SOLTHERM CS</b>	A substrate primer for smooth, low porous substrates	14kg Bucket	Applied directly to the masonry wall by brush, or roller.	
<b>SOLTHERM PROFILES &amp; BEADS</b>	Aluminium, PCG steel, stainless steel & PVC full system & surface mounted profiles.	Mostly 2.5m in length. Always refer to the specification and quotation	Full system beads are mechanically fixed and surface beads mainly bedded into base coat used as the adhesive. Always refer to the specification.	
<b>SOLTHERM MA</b>	Insulation adhesive specifically formulated for mineral wool insulation	25kg bag	Mix thoroughly with clean water (4.8 - 5.3 litre) allow to stand for 5 minutes and remix before applying in accordance with the specification.	
<b>MINERAL WOOL</b>	A1 insulation board	1200x600mm or 1000x600mm slab of varying 10mm incremental thicknesses 50-250mm	If required, the insulation slabs can be cut with a saw to a suitable size.	
<b>MECHANICAL FIXINGS</b>	ETA certified screw-in fixings with steel nails.		The fixing is installed through insulation and through scrim coat in accordance with the specification.	
<b>SOLTHERM UB Special</b>	Grey polymer modified base coat specifically formulated for application onto Grey EPS insulation and MW boards	25kg bag	Mix thoroughly with clean water (5.0 - 6.0 litres) allow to stand for 5 minutes and remix before applying in accordance with the specification.	
<b>SOLTHERM MB</b>	Flexible, polymer modified base coat specifically formulated for application onto mineral wool insulation	25kg bag	Mix thoroughly with clean water (5.0 - 5.5 litre) allow to stand for 5 minutes and remix before applying in accordance with the specification.	
<b>SOLTHERM GLASS-FIBRE MESH</b>	An alkali resistance reinforcement mesh	50x1,1m roll	Cut to size with sharp knife.	
<b>SOLTHERM E</b>	Cementitious brick slip adhesive specifically formulated for use with clay and concrete brick slips.	25kg bag	Mix thoroughly with clean water (5.4 - 5.6 litres) allow to stand for 5 minutes and remix before applying in accordance with the specification.	
<b>SOLTHERM SE</b>	Cementitious super elastic brick & stone slips adhesive specifically formulated for use with ceramic and clay brick slips, concrete and stone slips and natural stone.	25kg bag	Mix thoroughly with clean water (5.75 - 6.25 litres) allow to stand for 5 minutes and remix before applying in accordance with the specification.	
<b>BRICK SLIPS / STONE SLIPS</b>	Ceramic and clay brick slips, concrete and stone slips and natural stone manufactured to EN 14411, EN 771-1, EN-771-3, EN 1469, EN 771-5, EN 771-6 - subject to specification.		10-20mm thick brick slips, typically 65 x 215mm (alternative dimensions available on request).	
<b>SOLTHERM KL</b>	Cementitious pointing mortar specifically formulated for use with clay and concrete brick slips.	25kg bag	Mix thoroughly with clean water (2.5 - 3.0 litre) allow to stand for 5 minutes and remix before applying in accordance with the specification.	
<b>SOLTHERM IMP</b>	Silicone based water repellent sealer.	5kg bucket	Supplied as a ready-to-use product. Shake several times prior to application. Do not admix.	

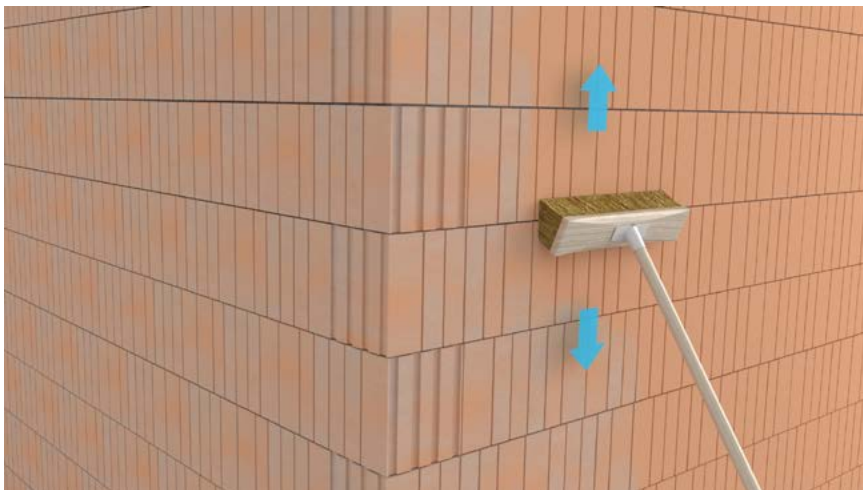
# INSTALLATION GUIDE

## SUBSTRATE PREPARATION



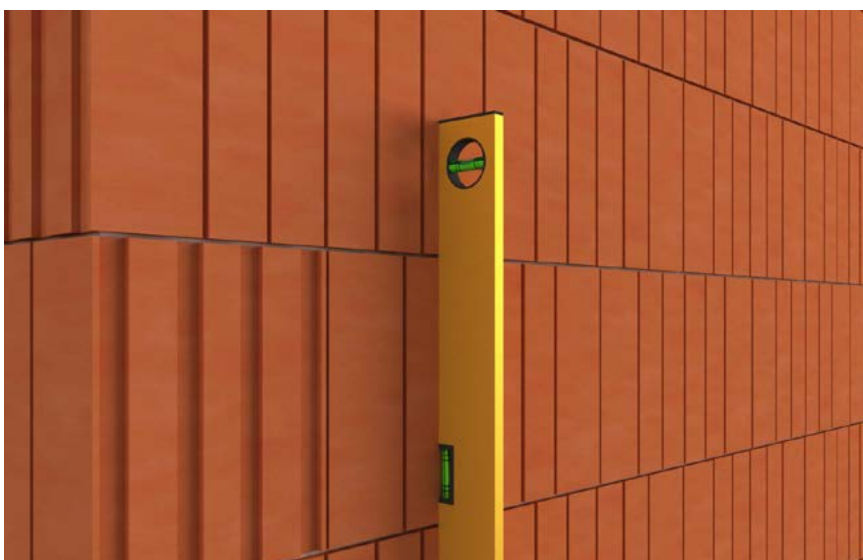
All heavy fungal growth must be removed from the substrate by either scraping or power wash and allowed to dry.

If the system is to be applied to an existing render substrate, it must be hammer tested first.



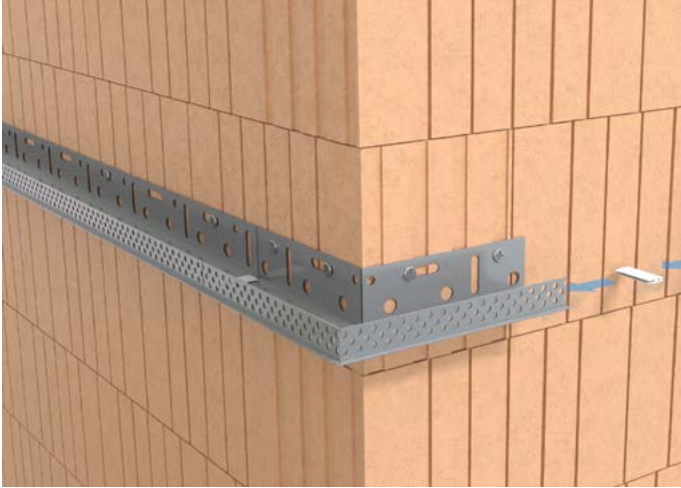
If required, apply FUNGICIDAL WALL WASH to the substrate in accordance with the specification and technical datasheet and allow to dry.

Apply either the SOLTHERM SP or SOLTHERM CS to the substrate in accordance with the specification and technical datasheet and allow to dry.



Surface irregularities and cavities (5-15mm) must be made good with SOLTHERM LRC, irregularities  $\leq 5$ mm can be levelled using SOLTHERM MB or SOLTHERM UB Special.

# STARTER TRACK INSTALLATION



The SOLTHERM STARTER TRACK is installed at DPC level and at least 150mm above ground. The starter track is mechanically fixed at 300mm centres with specified fixing and approx. 50mm from the edge.

The SOLTHERM STARTER TRACK must be mitred at external corners and linked together with adjacent profiles using profile joint clips.



If the substrate is undulating and not line and level, it is acceptable to use packers.



Due to the weight of the EPS insulation, it may be a requirement to temporarily support the SOLTHERM STARTER TRACK.



If the contract does require insulation below DPC, please refer to your specification and contact Soltherm Technical with any queries relating to the materials, installation techniques and detailing.

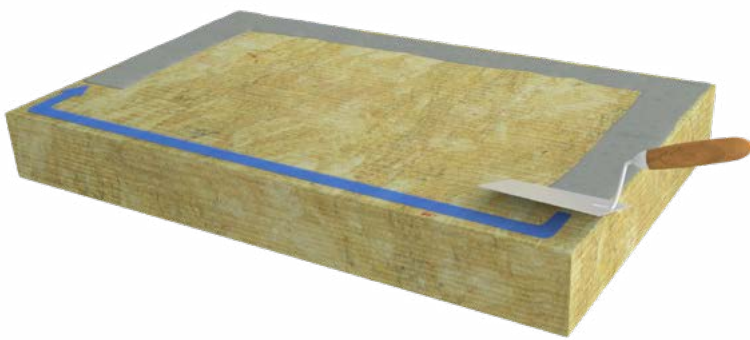
# INSULATION ADHESIVE APPLICATION

**Insulation adhesive, SOLTHERM MA or SOLTHERM UB Special, must be applied in all circumstances.**

There are two approved application options for the installer to choose from.

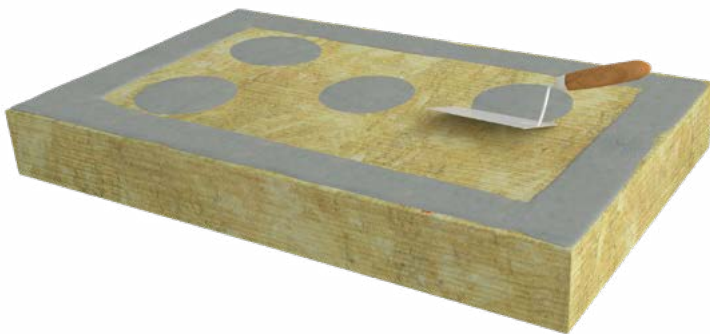
1. Ribbon & Dab Method – Suitable for substrate that have slight undulations
2. Notch Trowel Method – Suitable for line and level substrates,

Both methods of adhesive application must have a contact layer applied prior, this is to aid adhesion

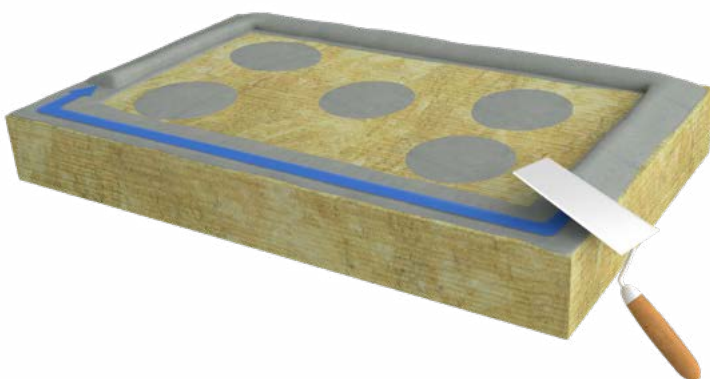


## **Ribbon & Dab Method**

Apply the SOLTHERM MA or SOLTHERM UB Special to the insulation around the perimeter of the board, minimum 30 mm.



Repeat the contact layer application for 6-8 large dabs (80-100mm) to the centre of the board



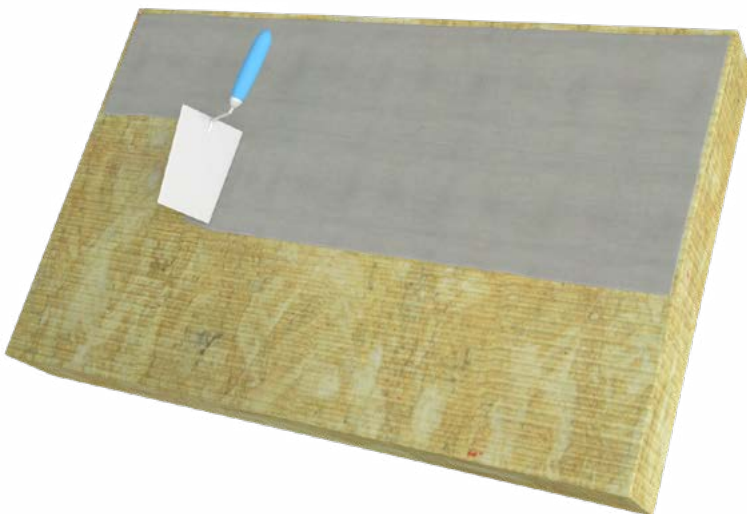
Once the contact layer is applied, apply further insulation adhesive to the perimeter and where the dabs are located.



# INSULATION ADHESIVE APPLICATION



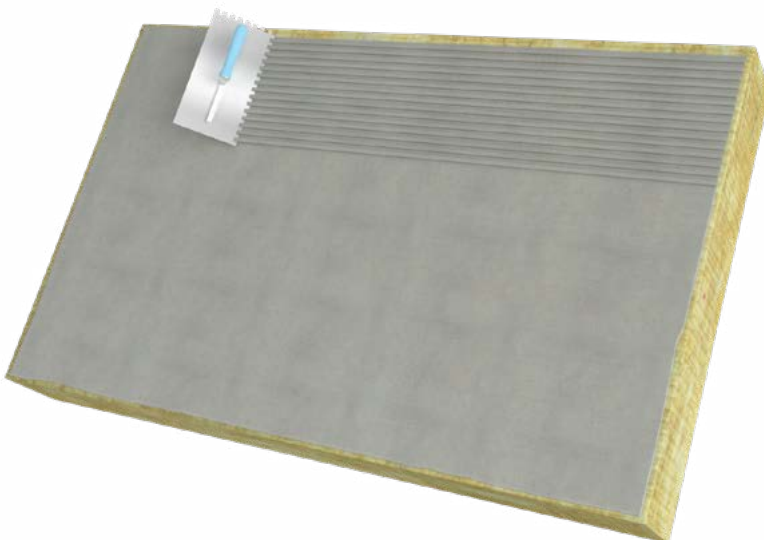
The adhesive thickness of the insulation adhesive layer, after pressing against the substrate wall, must be  $\leq 10\text{mm}$  and cover  $\geq 60\%$  of the overall area of the board.



## **Notch Trowel Method**

A contact layer must be applied to the entire back of the insulation board.

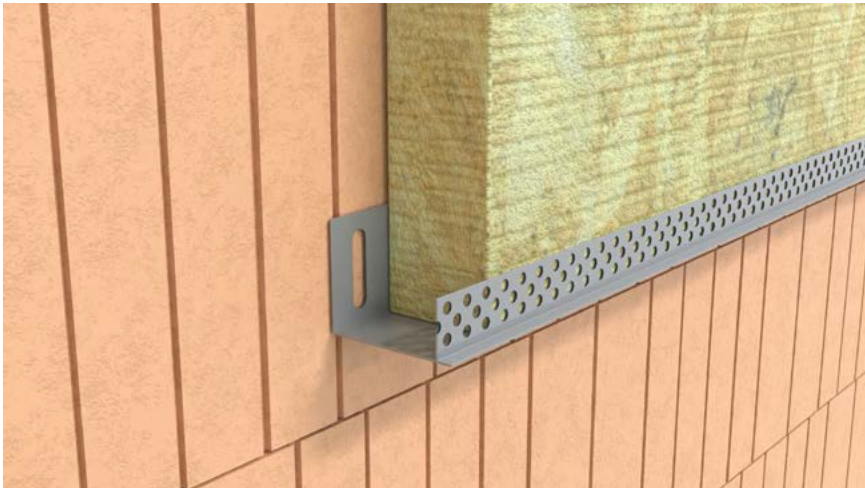
Once the contact layer is employed, the insulation adhesive can be applied with a 10x10mm notch trowel.



The insulation board is then pressed against the substrate wall and should achieve  $\geq 90\%$  contact area.

**Important Note: The insulation adhesive must be allowed to dry before installing the mechanical fixings.**

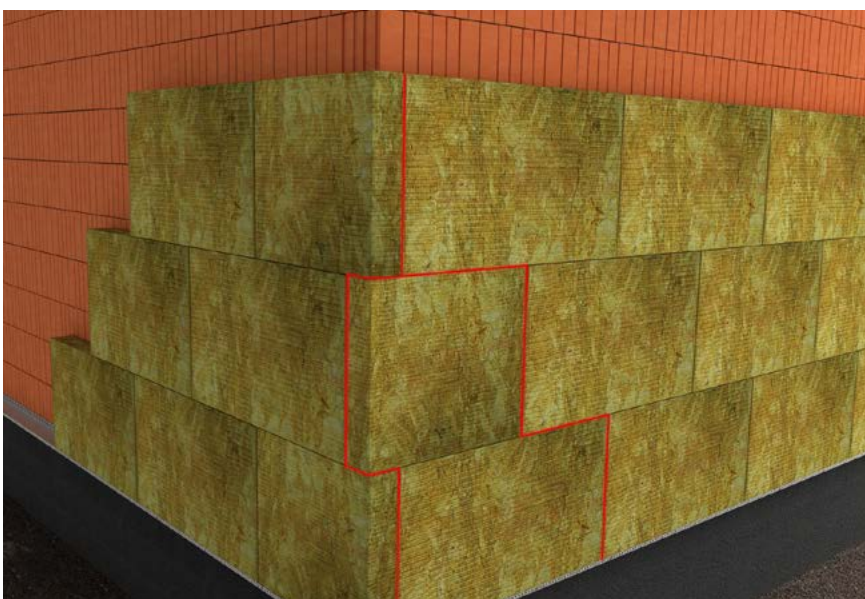
# INSULATION BOARD INSTALLATION



The first course of dual density mineral wool boards are placed into the SOLTHERM STATER TRACK.



Insulation boards must be placed against the substrate in a brickbond manner achieving a minimum 150mm stagger with the above/below insulation panel.



External corners are formed as per a brickwork corner, ensuring a full brickbond.

# INSULATION BOARD INSTALLATION



Always ensure that the insulation board are line and level throughout the façade, paying particular attention to external corners.



L shaped boards must be installed around all openings ensuring that no edge is smaller than 150mm and no piece of insulation smaller than 150mm throughout the installation.



**INCORRECT**

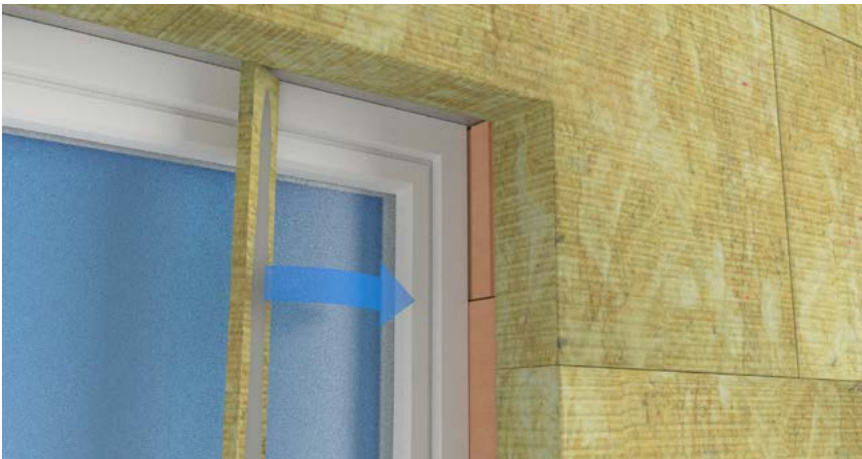


**CORRECT**

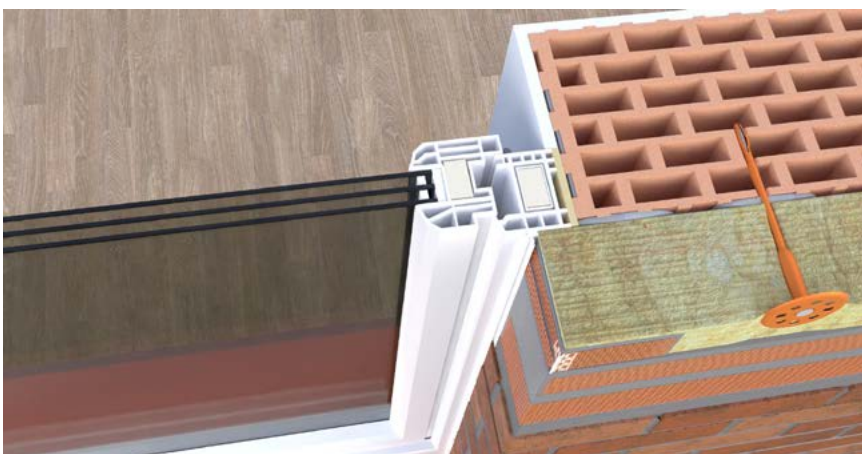
# INSULATION BOARD INSTALLATION



Any gaps between adjacent insulation panels must be filled with mineral wool slithers.



Where windows have recessed reveals and or heads, oversail the insulation board beyond the existing to create a channel to set a 30mm thick mineral wool insulation strip in place within the reveal, adhesively fit as appropriate.



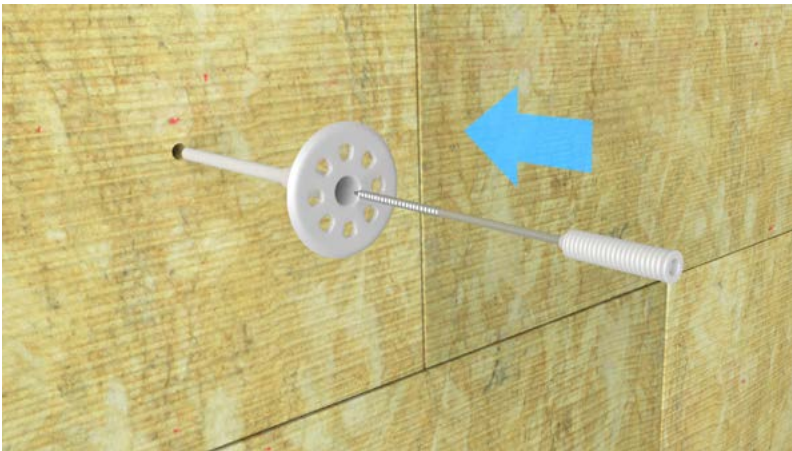
If windows are flush with the substrate, the main elevation insulation panels can simply over sail onto the window frame a minimum 20mm.

# FIXING APPLICATION DECO W BRIQ

Once the insulation adhesive has cured, proceed with the installation of the mechanical fixings.  
Always refer to the specification for the appropriate fixing pattern



Following the specified fixing pattern (minimum of 1 or 2 per insulation board), first drill through the insulation and into the masonry substrate with an 8mm diameter drill bit to the appropriate depth.



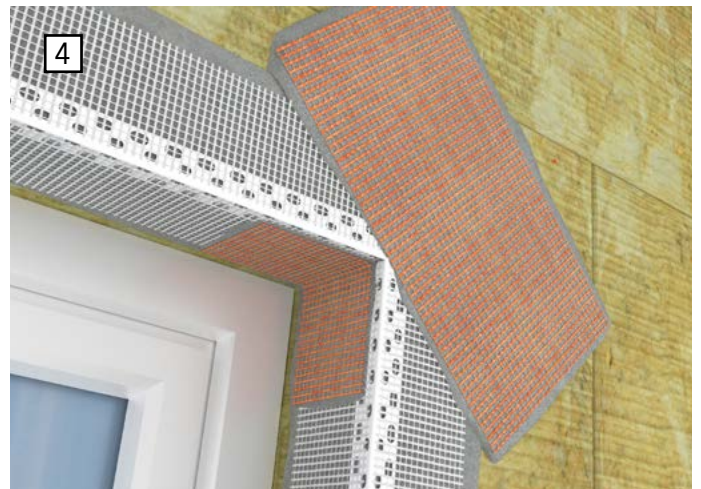
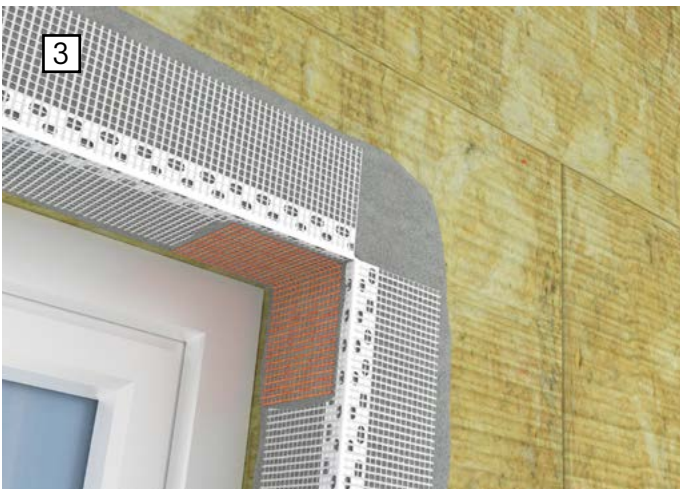
Place the fixing into the pre-drilled hole and push the fixing in until the head of the fixing is flush with the face of the insulation.



Screw or hammer (depending on fixing specification) the fixing into place ensuring the central pin is either flush with the fixing head or slightly recessed. The fixing head should be slightly recessed into the insulation face about 1-2mm.

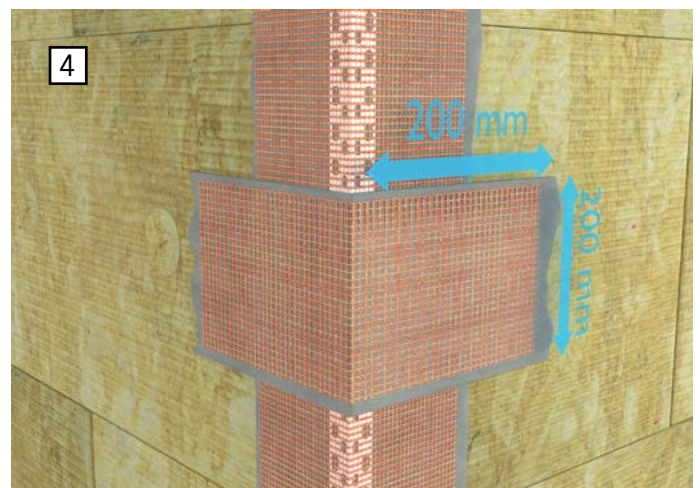
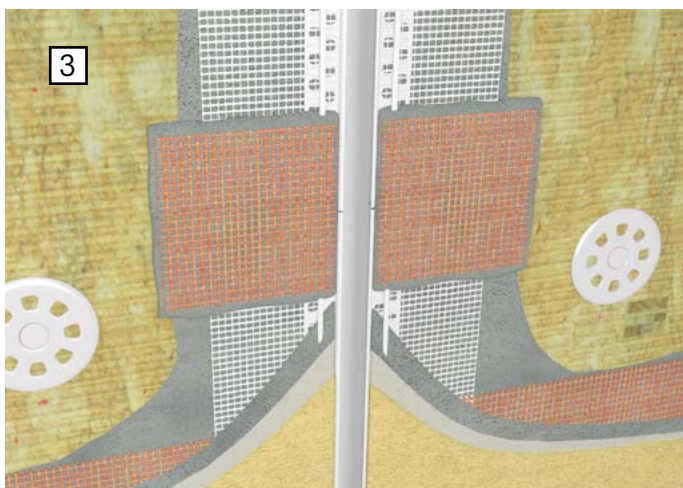
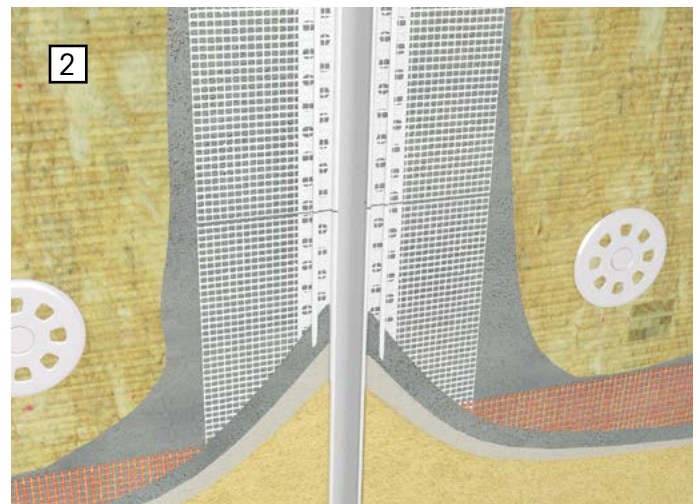
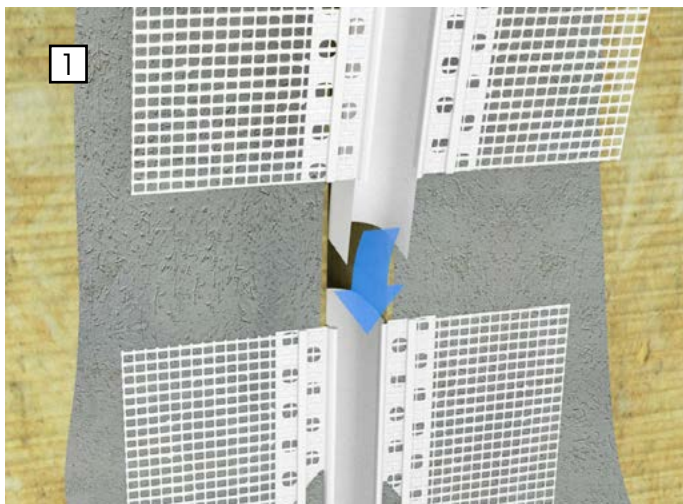
# GENERAL SURFACE MOUNTED BEAD APPLICATION

All surface mounted beads must have additional reinforcement placed over the join of adjacent beads to prevent cracking in the future. Additional stress patches of minimum 200x350mm cut from standard reinforcing mesh must be placed at the corners of all structural openings at an approximate 45° angle.



# GENERAL SURFACE MOUNTED BEAD APPLICATION

All surface mounted beads must have additional reinforcement placed over the join of adjacent beads to prevent cracking in the future.

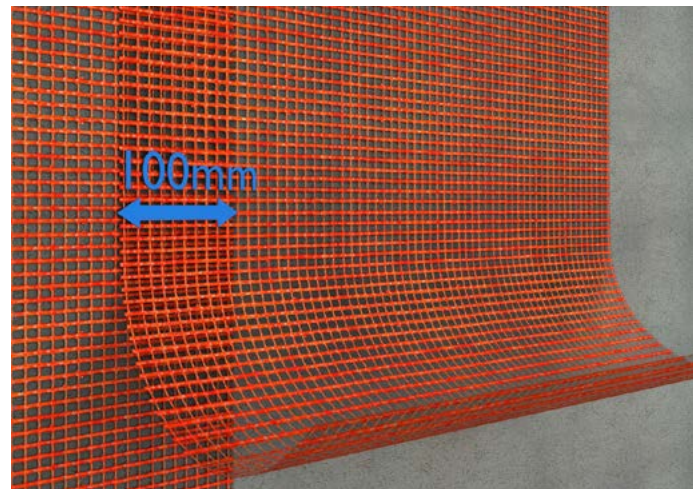


# BASE COAT WITH FIRST MESH LAYER APPLICATION

Once all the beads are cured and in place, mix the SOLTHERM MB or SOLTHERM UB Special base coat in accordance with the technical datasheet. Using a clean stainless steel trowel, apply a very tight contact layer of the base coat to the insulation boards, then apply a layer of base coat over the contact layer "wet on wet", 3-4mm thick, working up to the beads.



While the base coat is thoroughly wet, using an 8-10mm notch trowel, apply a vertical notch. Gently lay the reinforcement mesh into the wet base coat, keeping the mesh in the top third of the material and ensuring the mesh has a minimum lap of 100mm with all adjacent meshes.

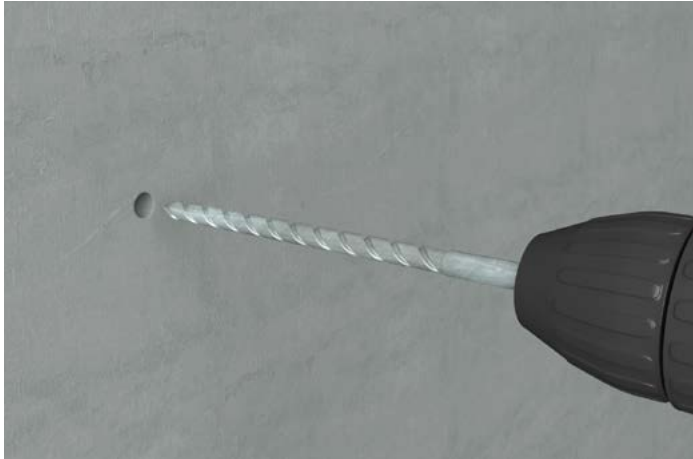




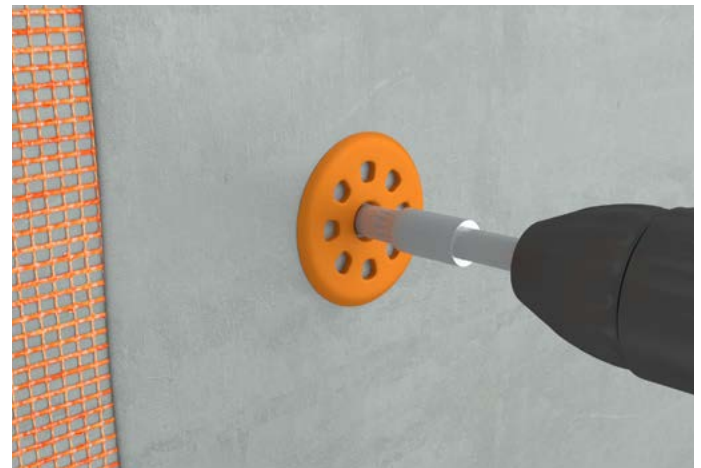
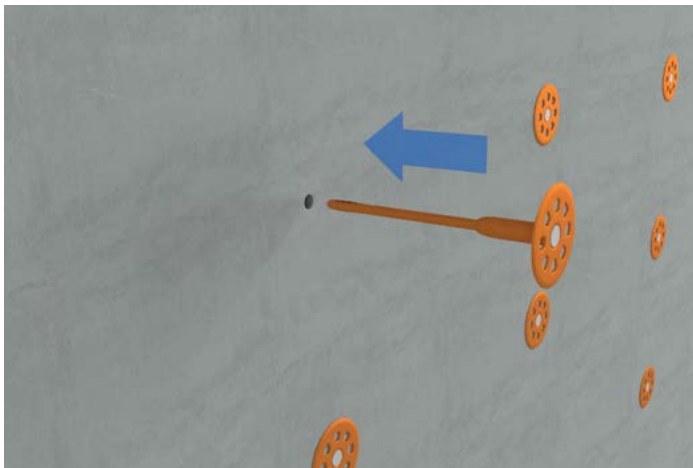
# FIXING THROUGH THE MESH APPLICATION

Whilst the specified basecoat is still wet and the Soltherm reinforcing mesh has been bedded in, proceed with the installation of the mechanical fixings.

Always refer to the specification for the appropriate fixing pattern.



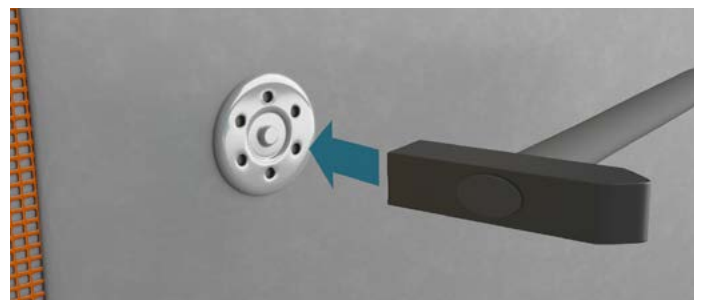
Following the specified fixing pattern, first drill through the basecoat and mesh, insulation and into the masonry substrate with an 8mm diameter drill bit to the appropriate depth.



Place the fixing into the pre-drilled hole and push the fixing in until the head of the fixing is flush with the face of the base coat.

Screw or hammer the fixing into place ensuring the central pin is either flush with the fixing head or slightly recessed. The fixing head should be slightly recessed into the scrim coat face about 1-2mm.

## FIRE FIXING INSTALLATION

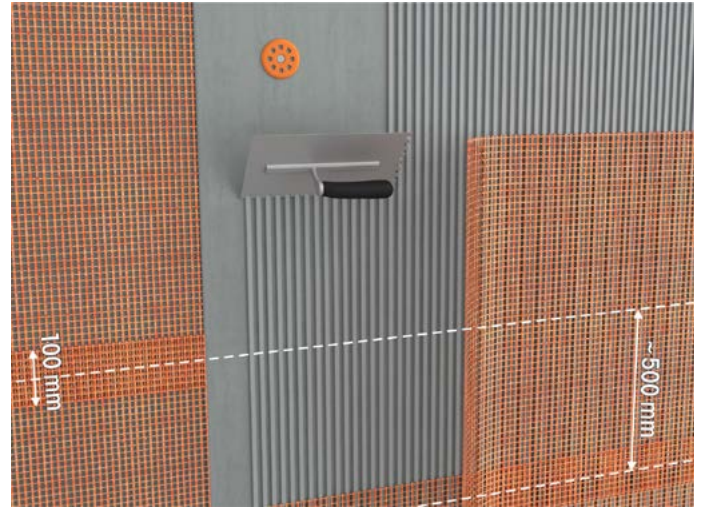
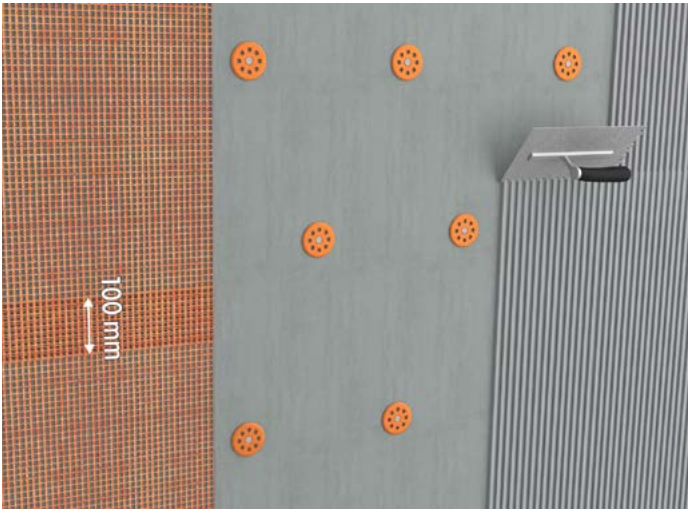


Drill an 8 mm diameter hole through the scrim and wet base coat at the required depth. Insert the stainless steel fixing into the hole with your hand as far as physically possible.

Using a hammer, gently hit the fixing centrally until it is recessed within the mesh and base coat approx. 1-2mm.

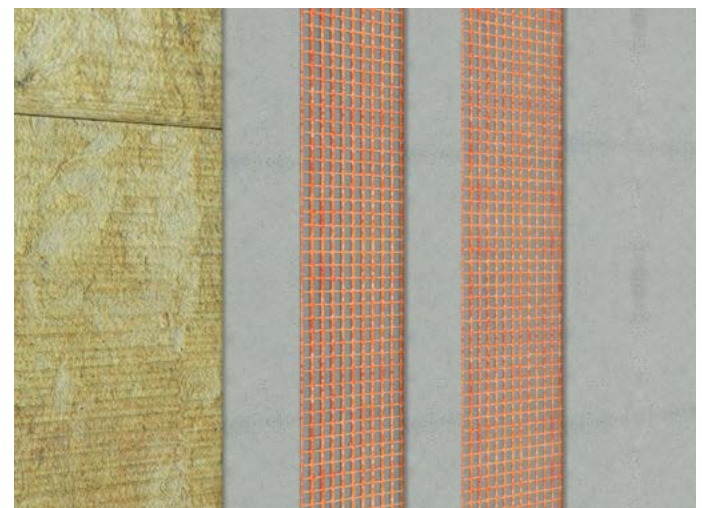
# BASE COAT WITH SECOND MESH APPLICATION

Allow SOLTHERM MB or SOLTHERM UB Special to sufficiently cure before proceeding with secondary reinforcing mesh application. In case of salt efflorescence sighting on the surface of the first reinforcing coat, prior to application of second reinforcing coat, it must always be dry cleaned with a brush and removed thoroughly. Then apply substrate primer SOLTHERM SP exactly once in one layer.



Apply a further coat of SOLTHERM MB or SOLTHERM UB Special at 1-2mm thick and lay through Standard SOLTHERM MESH ensuring no mesh is visible and is fully encapsulated in the base coat.

All secondary reinforcing mesh must maintain a minimum overlap of 100mm with adjacent mesh and all mesh joints must be staggered approximately 500mm from the joints the first reinforcing mesh application.



Allow the base coat to dry for approximately 24 hours before applying a tight slurry coat 1-2mm if required. The overall thickness of the base coat for DECO P BRIQ system should be between 4-6mm with two reinforcing meshes.

Allow SOLTHERM MB or SOLTHERM UB Special to fully cure before rasping any remaining trowel lines or protrusions and proceeding with the installation of the system.

# BRICK SLIP APPLICATION

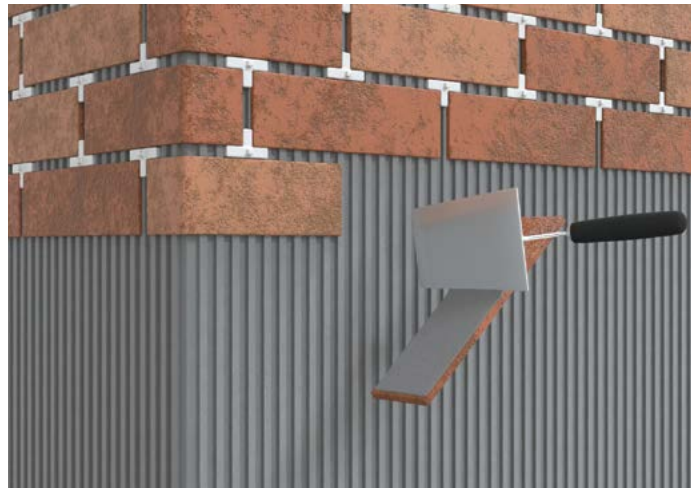
SOLTHERM MB or SOLTHERM UB Special must be allowed to fully cure and the application of SOLTHERM E or SOLTHERM SE must be no earlier than 72h (3 days) in optimal weather conditions (e.g. +23°C, 50% RH).

Mix SOLTHERM E or SOLTHERM SE in accordance with the technical datasheet.

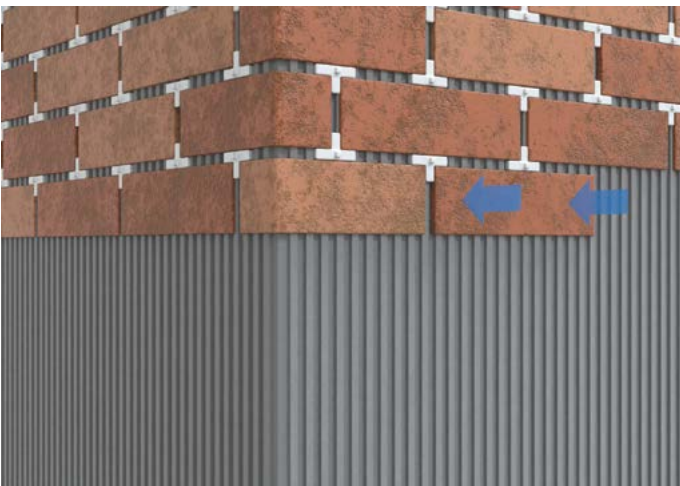
It is recommended that installation of the brick slips begins from building corners and openings.



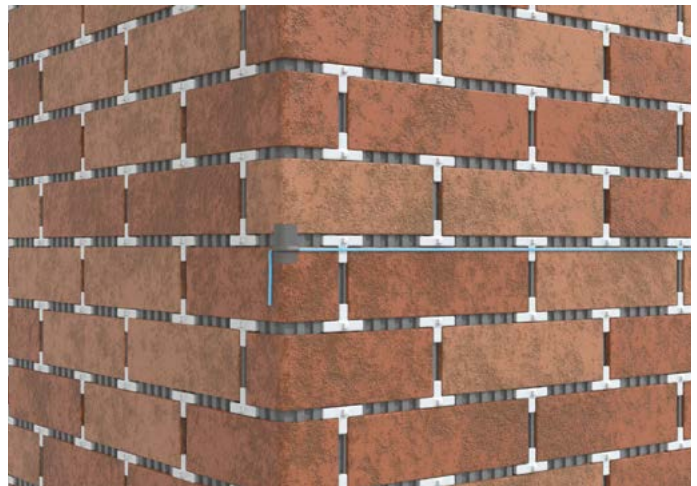
Apply SOLTHERM E or SOLTHERM SE to the cured base coat with an 8mm notched trowel, notching in various directions to allow optimal adhesion strength.



Apply a light contact layer of SOLTHERM E or SOLTHERM SE to back of the individual brick slips. Always ensure full coverage.



Firmly press the brick slip into place using a horizontal pushing motion, ensuring the collapse of the notched adhesive and 100% adhesion.



Following the general practices of brick laying, paying particular attention to the brick bond, apply the remaining brick slips, using plastic packers as guides to maintain the required joint width. Laser levels and string lines should be used to ensure application of the slips is level.

Allow SOLTHERM E or SOLTHERM SE to fully cure before proceeding with the installation of the system.

# POINTING MORTAR APPLICATION

SOLTHERM E or SOLTHERM SE brick slip adhesive must be allowed to fully cure and the application of SOLTHERM KL must be not earlier than 72h (3 days) in optimal weather conditions (e.g. +23°C, 50% RH).

Mix SOLTHERM KL in accordance with the technical datasheet.

SOLTHERM KL pointing mortar can be applied using one of two methods:

## HANDBOARD/HAWK METHOD



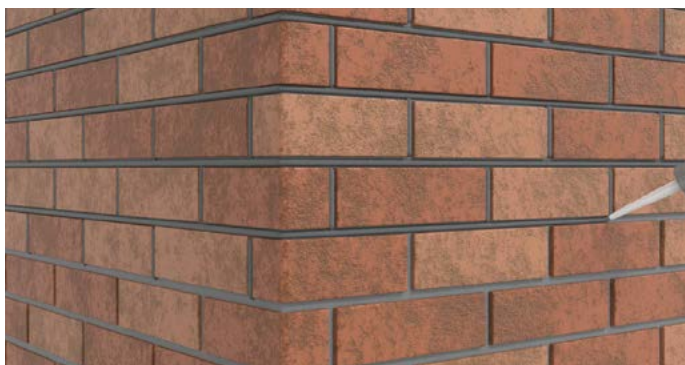
Using a handboard/hawk, offer SOLTHERM KL pointing mortar up the joint and using an appropriate trowel, fill the brick joints with SOLTHERM KL, fully filling the joint.



Once SOLTHERM KL pointing mortar has sufficiently picked up but remains 'green', point the mortar to the required method. Once complete, the walls are to be brushed down with a soft brush at an approximate 45° angle, removing excess pointing mortar and cleaning the face of the brick slips.

(Note: recessed pointing is not recommended)

## POINTING GUN METHOD

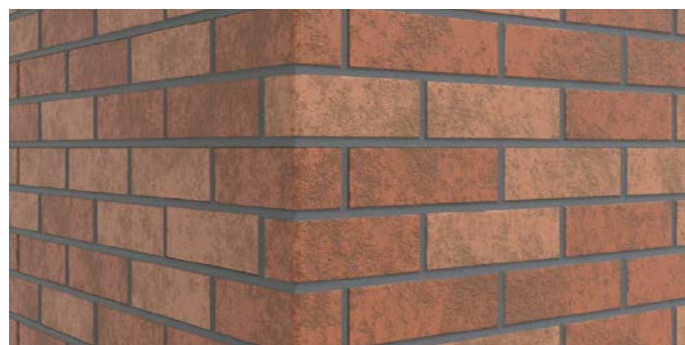


Place SOLTHERM KL pointing mortar into a suitable pointing gun. Using the pointing gun, fill the brick joints with SOLTHERM KL, fully filling the joint.



Once SOLTHERM KL pointing mortar has sufficiently picked up but remains 'green', point the mortar to the required method. Once complete, the walls are to be brushed down with a soft brush at an approximate 45° angle, removing excess pointing mortar and cleaning the face of the brick slips.

(Note: recessed pointing is not recommended)



Once the system has fully cured, proceed with the installation of SOLTHERM IMP.

# SOLTHERM IMP APPLICATION

The DECO W BRIQ system must be allowed to fully cure and the application of SOLTHERM IMP must be no earlier than 14 days in optimal weather conditions (e.g. +23°C, 50% RH).

Always ensure brick slip surfaces are dry, clean and free from any dust or other contamination.

SOLTHERM IMP is supplied as a ready-to-use product. Shake the product several times prior to application.

Apply SOLTHERM IMP by roller, brush or spray equipment until the substrate is thoroughly and evenly saturated.

Apply a second coat of SOLTHERM IMP in the same manner, immediately after the first, taking care to ensure the first coat does not completely dry out.

Care must be taken to ensure SOLTHERM IMP is not applied over the surfaces of polyurethane sealants and compressed sealing tapes.



Refer to Soltherm Technical Services for further guidance.



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