marmox

thermoblock

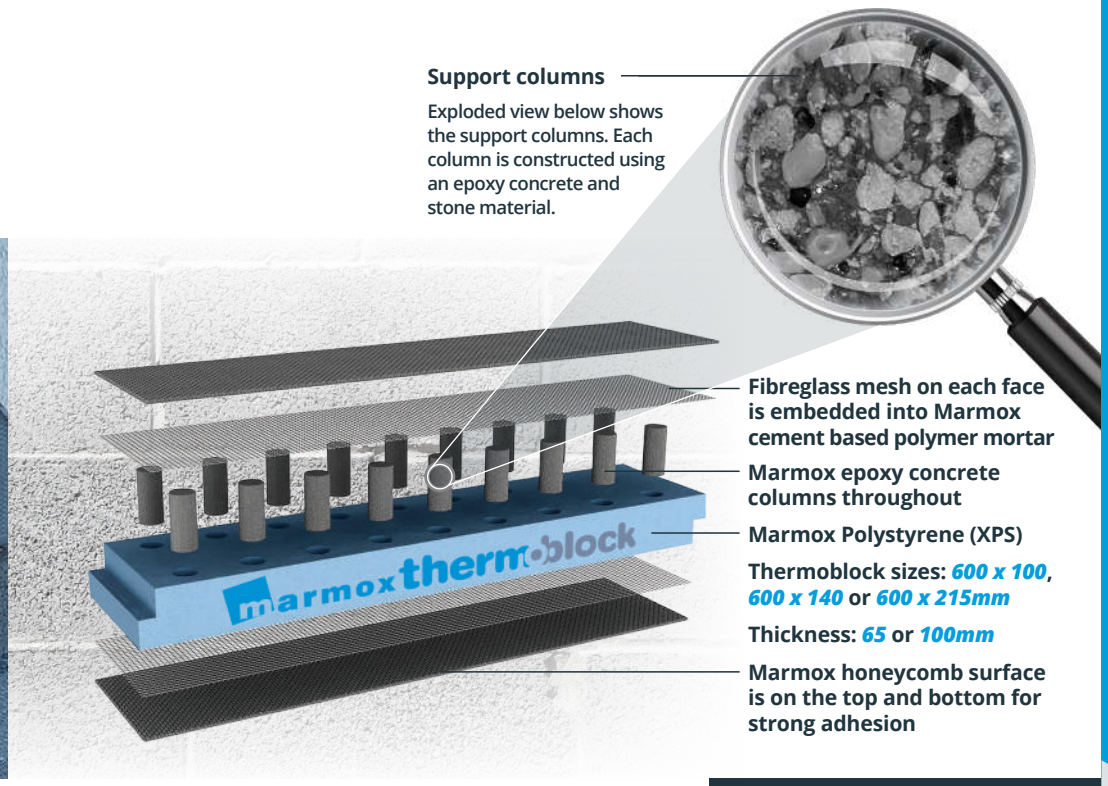
Reduce heat loss at the base of walls

Load Bearing Insulating Blocks

Product Brochure

marmox therm•block

Reduce heat loss at the base of walls



Key Benefits

- Stops cold bridging
- Improves energy efficiency
- Reduces risk of condensation
- Suitable for masonry, timber frame, steel frame and more

Keeping the heat in

Maintaining a buildings heat needs more than just insulation in the walls and roof. At ground level, there are points where heat can easily escape – these are known as thermal bridges.

Marmox Thermoblocks have been designed to deal with this problem. They are lightweight, slim blocks that replace one course of brick or block at the base of a wall, beneath door thresholds, or under window sills. Inside each block is high-performance insulation, which acts as a heat barrier and surrounds columns of an epoxy type concrete. This provides very good structural strength.

Thermal imaging:
This shows heat lost through the bottom of a standard wall build up.

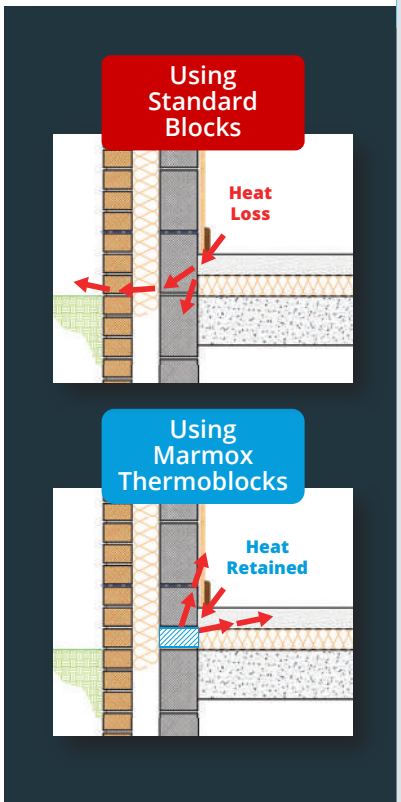
Thermal bridging can be a complicated subject – but the solution doesn't have to be.

Marmox Thermoblocks are hassle free to install. They are lightweight and can be easily trimmed. If you need to cut through the columns, a brick saw will suffice. You can then lay them using mortar as you would a normal brick. Simply seal the joints with Marmox MPS360 sealant and then build the rest of the wall as you normally would.

Condensation, damp & mould

Cold spots around the base of walls and at openings are not just uncomfortable, they can also lead to condensation, damp and mould. With Marmox Thermoblocks installed it keeps these vulnerable areas warm and dry.

Marmox Thermoblocks are made using Marmox's own blown extruded polystyrene (XPS) which is a closed cell, waterproof barrier and, because of their resistance to water, can safely be laid directly on the foundations or slab, under the DPC, without compromising the damp proofing.



Fixing Marmox Thermoblocks?

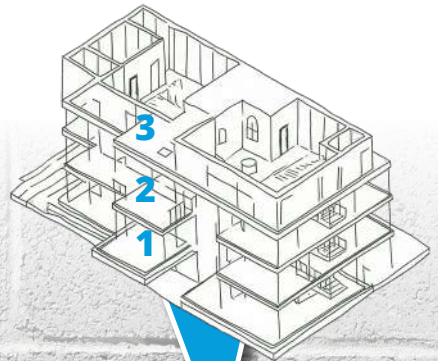
marmox thermoblock
Reduce heat loss at the base of walls

Easy to Cut
Use a handsaw *(brick saw for the columns)*

Fix with Mortar
Lay it the same way you lay a normal brick

Seal the Joints
Apply MSP360 between the joints

DO NOT STACK
(Or lay them on their side)
Thermoblocks are designed for just one course



Strong enough to Support buildings with up to 3 storeys

Advantages

- Ultra-High Strength *(9 newtons/mm²)*
- Thermal Conductivity is very low *(0.053 W/mK)*
- Waterproof
- Lightweight
- Easy to cut

Important Notes

- Do not stack the blocks on top of each other
- Do not lay them on their side. The cement mesh surface should always be on top.

Thermoblocks mean less insulation elsewhere

Every new build has to meet strict energy performance standards. Normally, to hit those targets, builders have to add thicker insulation in the walls, floors or roof.

But here's the problem: no matter how much insulation you add, if cold bridges are left at the base of the walls, heat will still escape and the building won't perform as well as it should.

By installing Marmox Thermoblocks at the bottom of the inner leaf, you cut out those cold bridges completely. That means the overall energy performance of the building improves. Because you've dealt with the weakest points, the rest of the structure doesn't need to make up for that lost heat and so less insulation will be needed.

Save money

So by using Marmox Thermoblocks you can save money on materials, reduce wall thickness (giving you more internal space), and make the build simpler — all while keeping the home warm, dry and comfortable.

Thermoblocks DO NOT work in the same way as aircrete (Thermal blocks).

- **A different function:** AAC Thermal Blocks are used to build the whole wall, wereas Marmox Thermoblocks are "insulation inserts" that are placed at weak points (cold bridges).
- **Thermoblocks vs Thermal Blocks:** Thermoblocks are targeted at preventing heat loss at junctions, whereas Thermal or aircrete blocks are used simply to help with the wall's overall thermal resistance.

  Material & performance: Since Thermoblocks merge insulation material (polystyrene) with structural material, they act physically like concrete blocks while at the same time providing the thermal qualities of insulation.
- **Used together:** AAC Thermal Blocks can be used on top of Thermoblocks for the rest of the wall.

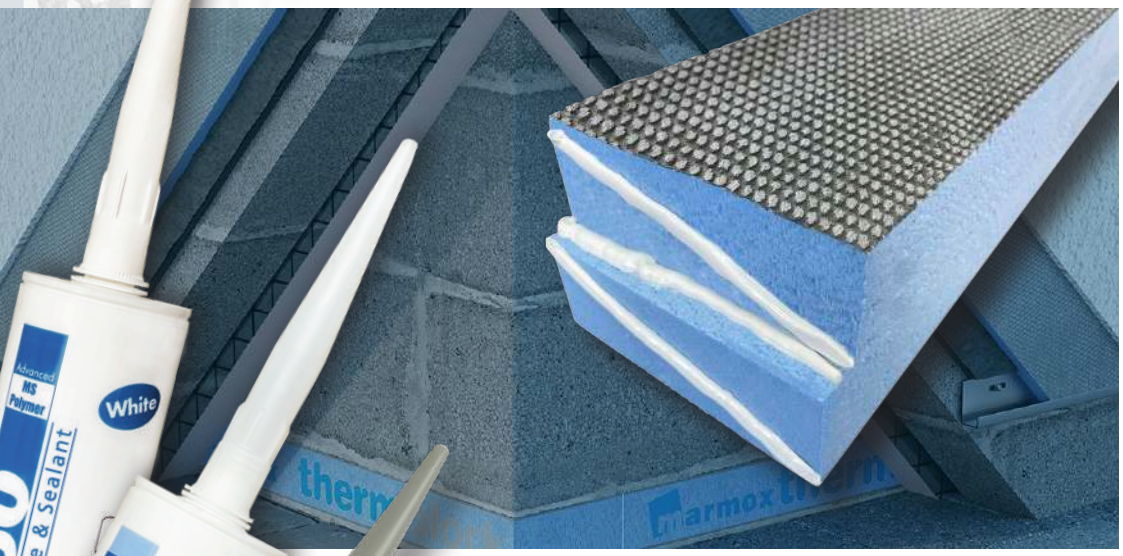
BBA Certified

Marmox Thermoblocks are BBA Certified, giving confidence that they meet strict UK building standards. Certification from the British Board of Agrément confirms their performance in reducing cold bridging, supporting structural loads, and delivering long-term durability.

BS EN standards

Thermoblocks are also tested to relevant BS EN standards, adding further assurance of quality and reliability. Backed by this independent approval, Thermoblocks provide peace of mind on site, making them a trusted choice for energy-efficient construction projects.

Sealing the joints



MSP360 Range
White, Clear or Fire.
All suitable for use with Marmox Thermoblocks

MSP360 - Premium Adhesive & Sealant

The joints between Thermoblocks must be sealed, which is why Marmox MSP360 Adhesive is an essential part of the system.

This high-performance adhesive not only bonds the blocks securely but also seals the joints, preventing unwanted air leakage and maintaining the thermal performance of the wall.

How to use:
Apply 3 lines of MSP360 as shown above.

Laying Thermoblocks:
Thermoblocks should be laid as a single course.

marmox thermoblock
Reduce heat loss at the base of walls

Insulation		
Property	Marmox Thermoblock	
	65mm thick	100mm thick
Width (mm) = Weight *(kg)*	100 = 1.6	100 = 2.2
	140 = 1.9	140 = 2.6
	215 = 2.5	215 = 4.0
Thermal conductivity *(λ)* of insulation core *(W/mK)*	0.053	0.053
Vertical thermal resistance (R) of insulation core *(m2K/W)*	1.4	2.1
Water absorption	3.1%	2.2%
Max operating temp	75°	
Reaction to Fire, Euroclass	Class E	

Dimensions	
Width *(mm)*	100, 140, 215
Length (mm)	600
Thickness (mm)	65, 100

Compressive Strength	
Declared *(N/mm^2)*	9.0

Shear Strength	
'Thunderbolt' connecting SIP/timber frame (V_{Ed})...	Strength
65mm high Thermoblock	3.6kN
100mm high Thermoblock	2.3kN
Characteristic mortared to a concrete block (F_{vk})	0.18N/mm^2

Typical applications

- **Base of a masonry wall:** Preventing heat loss through traditional solid or cavity wall builds
- **Base of a SIP/timber frame wall:** Supporting lightweight structures without thermal looping
- **Base of a steel frame wall**: Maintaining Y-value performance in light-gauge or hybrid builds
- **Under doors and windows**: Providing thermal continuity around openings in the envelope

To request a specification, such as ***internal wall***, ***solid wall***, ***outer leaf***, ***ICF wall***, ***steel beam, basement wall or parapet wall***, please contact sales@marmox.co.uk

For further information visit:
www.marmox.co.uk/thermoblock

Supporting the whole build

At Marmox we don't just make products — we also support the people who design and specify them.

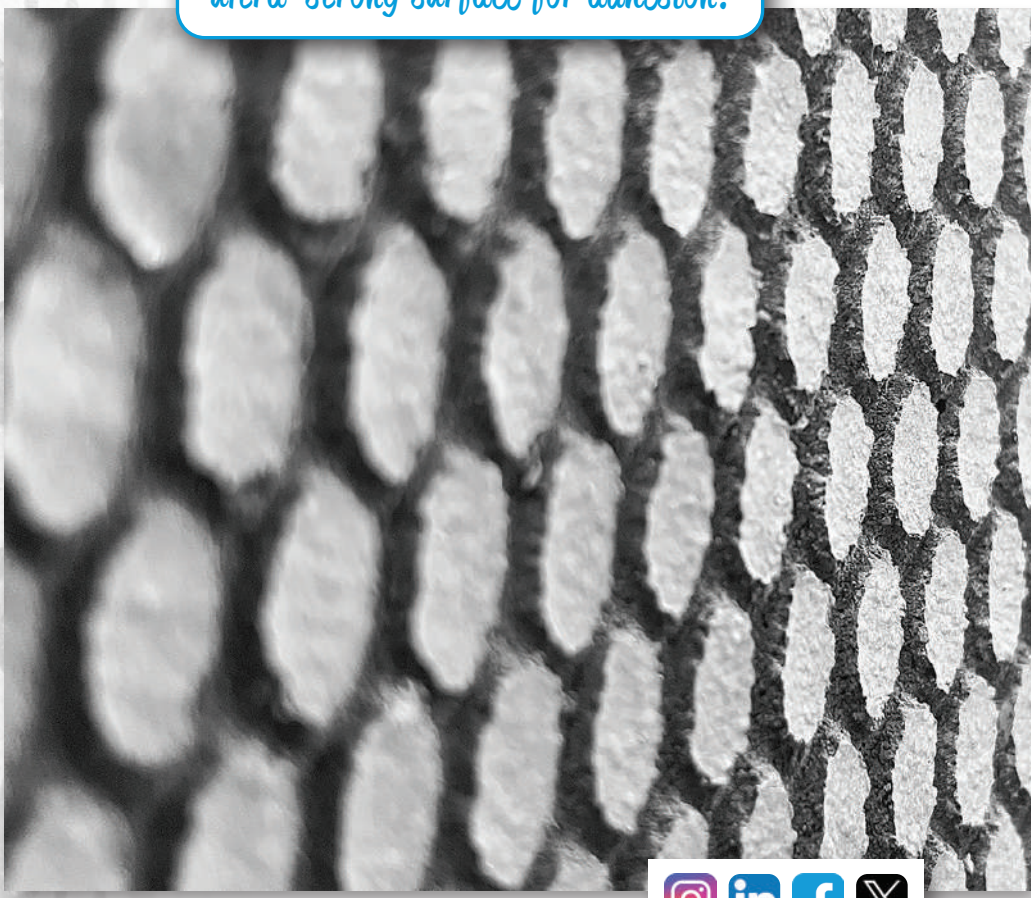
CPD Training
Free, accredited RIBA and RIAI CPDs available for architects and specifiers.

Thermal Modelling
Independent psi calculations to prove compliance and performance.

Marmox products are supported by these services to give architects, specifiers and project teams the confidence that every detail has been properly considered.

Always look out for the honeycomb finish

It means... Genuine Marmox and an ultra-strong surface for adhesion!



Marmox UK Ltd

Caxton House,
101-103 Hopewell Drive,
Chatham, Kent. ME5 7NP
United Kingdom

For information and advice:
Tel: 01634 835290
Email: sales@marmox.co.uk
Web: www.marmox.co.uk

marmox
Waterproofing & Insulation Solutions