

Specification to eliminate or reduce thermal bridging where a pitched roof abuts a gable wall

Specification:	ROOFLINE
Product ref:	Marmox Thermoblock
Manufacturer:	Marmox UK, Caxton House, 101 Hopewell Drive, Chatham, Kent ME5 7NP. 01634 835290; Email: sales@marmox.co.uk; http://www.marmox.co.uk/.

Product Use: A sloping roof line of an extension built against an existing gable wall can create a cold bridge which can be reduced incorporating a sloping line of Thermoblocks into that wall.

Description: Marmox Thermoblock is a load-bearing heat-insulating building block consisting of two rows of load-carrying epoxy-concrete columns of low thermal conductivity bonded to polymer concrete layers reinforced with fibreglass mesh which comprise the upper and lower surfaces. Thermally insulating Extruded Polystyrene surrounds the columns.

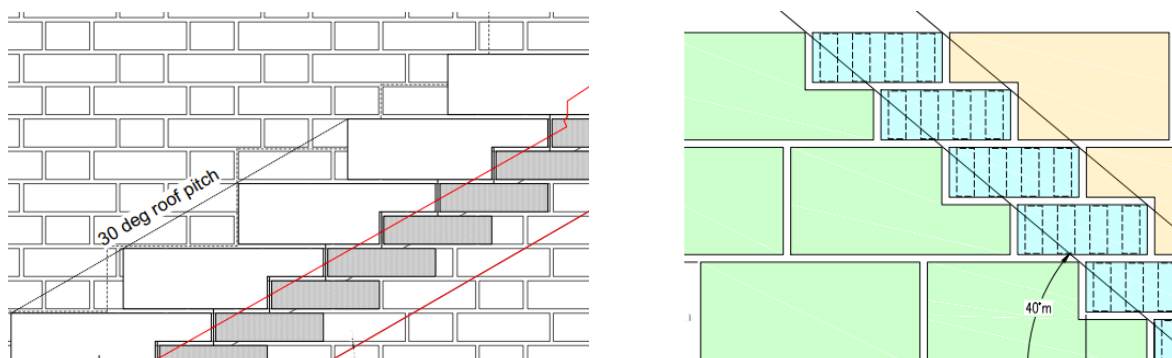
Dimensions: Length = 600mm, Thickness = 65mm or 100mm, Width = 100mm, 140mm or 215mm

Marmox Thermoblocks are positioned within a gable wall form a thermal break in the along the line of the adjoining lower roof rafters by overlapping their ends but ensuring at least half their length is supported above and below structural masonry units.

- Conditions:**
- 1) The bricks or blocks of the wall are no narrower than the width of the Thermoblock.
 - 2) Thermoblocks can be overlapped but at least 50% of their total length must be in contact with a masonry unit. This is enabled by cutting the length of the Thermoblocks which is determined by the angle of the roof line.
 - 3) The minimum length they can be reduced to is 250mm.

EXAMPLE SPECIFICATIONS -

Can be used in brick walls, block walls or combinations of both.
 65mm high Thermoblocks can replace bricks whereas two rows of 100mm high Thermoblocks “semi-stacked” can replace one 215mm high block as the following examples show.



- In all applications, no more than 50% of the length of each Thermoblock can be in contact with another Thermoblock.
- Thermoblock is fixed with exactly the same mortar as is used to fix the concrete blocks and bricks.

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- Properties:** Average λ value of 0.05W/mK (to EN13164/EN13167)
Mean compressive strength of 9.0N/mm² (to EN772-1)
Fire resistance >120minutes (to EN1365-1)
Water Absorption <3.5% (to EN771-4).
- Authorities:** BBA certified (10/4778)
ISO9001 (Bureau Veritas)
BRE – Certified Thermal Products Scheme, <http://www.bre.co.uk/certifiedthermalproducts/>
Fire Safety Report: 16781B (Warrington Fire)
- Treatment:** The vertical sides of the Marmox Thermoblock **must not be visibly exposed**. It is unaffected by moisture and weather but is susceptible to long-term UV radiation and can also be damaged by gnawing rodents and insects.
- The exposed face must be completely covered either with: -
- External insulation, continued from the rest of the wall
 - A sand/cement + polymer render which keys onto the mesh/scrim tape.
 - Decorative stone, ceramic tiles or brick slips fixed to the vertical polystyrene surface (+ *scrim*) with a sand/cement + polymer mortar (or flexible tile adhesive)
- Limitations:**
- 1) No fixings, including that of the pitched roof can be mechanically secured into the Thermoblocks.
 - 2) Must not be used with any adhesives, sealants, waterproofing treatments that contain organic solvents. The compatibility of ANY none standard material should be determined by checking whether that material is compatible with polystyrene – if it is not, then it cannot be used with Thermoblock.