CavityTherm®

Built-in Full Fill Wall Insulation

A continuous wall insulation system

Innovative Products

Delivering ultimate thermal performance with the added assurance of inbuilt protection from wind driven rain.

X021 Xtratherm

Improved Thermal Conductivity

PLATINUM SERVICE

Xtratherm®

More than insulation

CavityTherm®

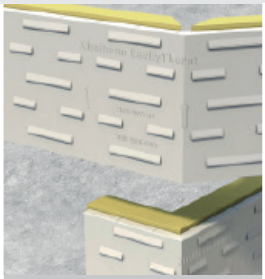
Built-in Full Fill Wall Insulation

The Complete Cavity Wall System

CavityTherm is a high performance composite board of enhanced PIR with a lambda value of 0.021 W/mK, for full fill cavity wall applications.

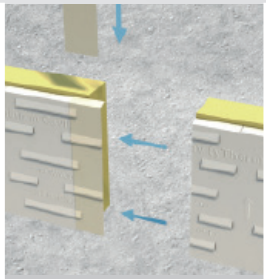
CavityTherm has gas tight facings with one face bonded to a profiled HIPS skin during manufacture to provide a drainage plane.

Integral Rain Barrier



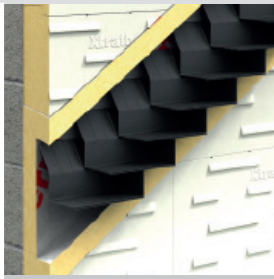
Preformed Corner Panels

Service Void Panels



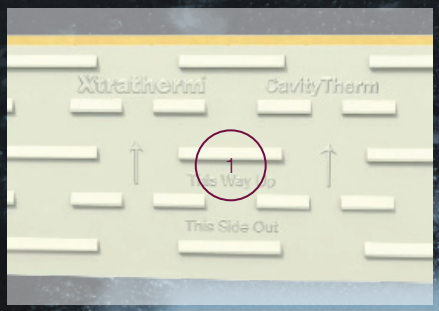
Jointing Strip

Hockey Stick Insulation



Cavity Tray Channel

Real performance on actual construction sites.

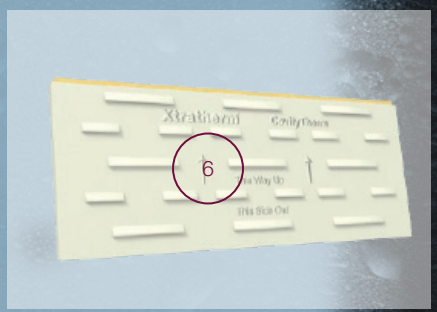


1. Engineered HIPS skin redirects moisture back onto external leaf.

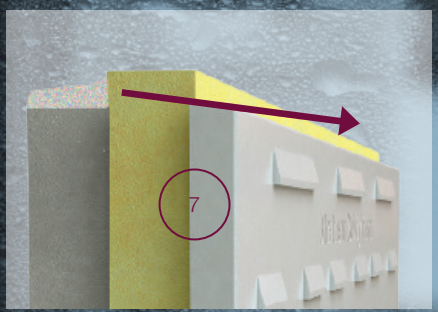
2. Engineered jointing on all edges to provide continuity of insulation layer.

3. Preformed slots for wall ties that prevent board creep.

5. High performance core - 0.021 W/mk Thermal Conductivity.



6. BBA approved.

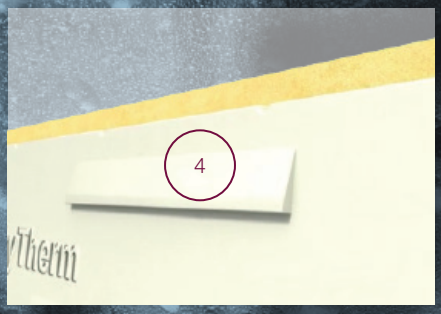


7. Edging sloped towards outer leaf to ensure wall ties sloped down.

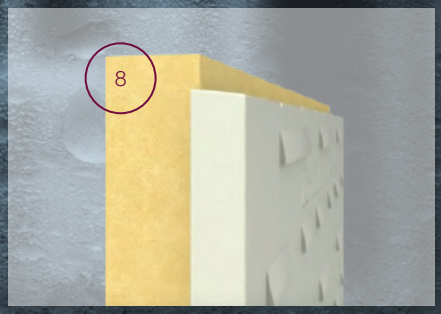
CavityTherm's unique engineered profiled facing directs any moisture that might penetrate the external wall down the protective facing and back onto the external leaf, giving added protection from wind driven rain.

The board includes specifically designed rebated edge detailing on all four edges to allow the system to tightly interlock when installed. This engineered jointing of the insulation layer, with the addition of bespoke ancillary pieces to insulate effectively around services such as hockey sticks, meter boxes and corner details, ensures continuity and results in excellent thermal bridging detailing.

Contents



4. Flutes to deflect moisture onto outer leaf.



8. Raised insulation at junction acts as a barrier against mortar squeeze.

Why CavityTherm?

Part L 2013 has introduced the 'Fabric Energy Efficiency Standard' (FEES) into the Building Regulations.

FEES had already been incorporated into The Code for Sustainable Homes back in 2010 and SAP reports would have quoted a FEES score as part of the results from the 2009 version. So FEES is not a completely new concept but one that clarifies what builders, designers and manufacturers need to do to achieve low/zero carbon fabric designs in terms of U-values, detailing and air tightness for 2016-2020. A 'Recipe' for compliance has been written within Table 4 of Part L, offering a specification for compliance, where a wall U-value of 0.18 W/m^{2}K is suggested.

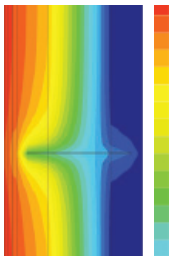
CavityTherm built into a traditional 100mm cavity using traditional foundation, building skills and materials achieves this 0.18 W/m^{2}K target. A practical, affordable solution to low energy design, that results in traditional, desirable homes.

Fabric Energy Efficiency Standard

In 2009, based on extensive R&D and collaboration with the industry, the Zero Carbon Hub made initial proposals for a Fabric Energy Efficiency Standard (FEES). This Standard was developed to support the development of Building Regulations AD L1A, 2016. FEES is now incorporated into the Code for Sustainable Homes and 2013 Part L Regulations.

It's not just about simple U-values

Insulation performance is no longer about simple U-values. How insulation interconnects with other elements and junctions in the design is critical. The aim is to achieve a continuous thermal layer that minimises heat loss at those junctions. This is thermal bridging and is measured and accounted for as a Y-value within SAP calculation. For full information on Thermal Bridging and CavityTherm see page 10.



The Affordable Solution

Apart from the practical reasons for maintaining the traditional cavity width, there are also cost implications that must be considered when the decision has been taken to widen a cavity over 150mm.

There are cost implications that must be considered when the decision has been taken to widen a cavity to insert a greater thickness of insulation.

In the publication issued by the Zero Carbon Hub, 'Defining a Fabric Energy Efficiency Standard for zero carbon homes Appendix D Cost analysis', the cost involved in increasing a wall cavity from 85mm to 210mm added an additional £2,570.00 to a typical semi-detached and £4,512.00 to a detached property.

To increase a cavity out to 200mm on the semi-detached property could add up to £28.25 per square metre of external wall area - before insulation costs.

The Technical Solution

Achieving Fabric Energy Efficiency Standards

Building to 2013 standards or looking towards Zero Carbon and Passive levels, CavityTherm in a traditional brick wall with a reasonable cavity width will get you there!

Achieved U-values

Element	U-values (W/m²k)
Walls	0.14
Roofs	0.12
Floors	0.15
Windows	1.20
Doors	1.50
Thermal Bridging	Y=0.05
Air Permeability	5m³/hr/m²

FEES Targets (Conducted in a range of dwelling types)

U-value	Unit (W/m²k)
Walls	0.15 - 0.18 W/m²K
Roofs	0.13 W/m²K
Floors	0.13 - 0.15 W/m²K
Windows	1.2 - 1.4 W/m²K
Doors	1.0 - 1.4 W/m²K
Thermal Bridging	0.04 - 0.07 W/m²K
Air Permeability	5.0 - 5.2 m³/hr/m²@50Pa

CavityTherm built into a traditional 100-150mm cavity using standard foundation widths, building skills and local materials achieves U-values down to 0.12 W/m²K. A practical, affordable solution to low energy design, that results in traditional, desirable homes preferred by homeowners.

The Practical Solution

CavityTherm is proven to provide the most cost effective answer not only reaching Zero Carbon U-values but, also achieving Thermal Bridging targets.

You design your homes to a high standard. They are homes that people want, the traditional look, using the skills and materials that are familiar to you and your customers.
With the skills of the traditional builder, attention to detail and CavityTherm from Xtratherm, we've got it sorted!

Applications

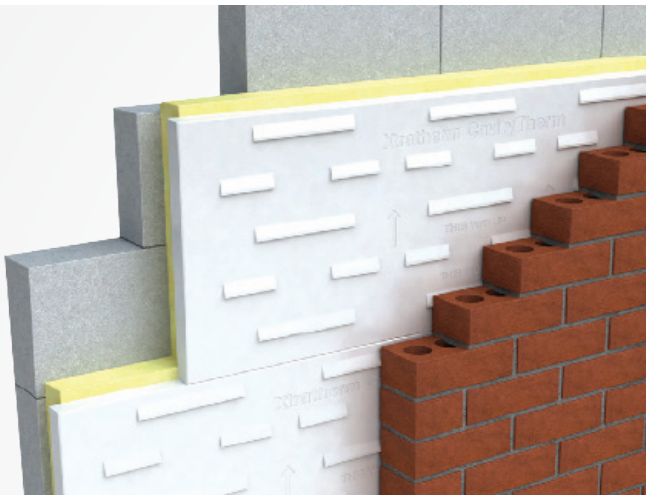
Cavity**Therm**®

Built-in Full Fill Wall Insulation

CavityTherm is an innovative built-in insulation for traditional walls that achieves passive level U-values as low as 0.12 W/m²K with excellent thermal bridging detailing in cavities less than 150mm wide.

CavityTherm Walls Application

- Engineered HIPs facer provides wind driven rain protection
- Moisture redirected to outer surface
- Prepositioned slots for sloping wall ties - no creep
- Fully engineered jointing - no reliance on taping
- Full range of accessory pieces build continuous system
- Excellent Thermal bridging values



U-values

CavityTherm (Inner block 100)

Block Type	**100mm**	**125mm**	**150mm**
Light 0.15	0.18	0.15	0.12
Med 0.33	0.19	0.15	0.13
Dense 1.15	0.20	0.16	0.13

CavityTherm			
Length (mm)	1200		
Width (mm)	450		
Thickness (mm)	100	125	150
Typical R-value*	4.52	5.71	6.90

*PIR only

BBA
CERTIFICATE CS/nnnn-n
U Value Competency Scheme

Specification

The built in wall insulation system shall be_ _ _mm CavityTherm manufactured to EN 13165 by Xtratherm, including corner boards and ancillary detail components comprising of free engineered jointed rigid Polyisocyanurate (PIR) with a lamba value of 0.021 W/mK with heavy low emissivity foil facings and engineered outer skin to achieve a U-value of_ _ _W/m²K for the wall element. Refer to NBS clause F30 150, F30 12. To be installed in accordance with instructions issued by Xtratherm.

CavityTherm's unique engineered profiled facing directs any moisture that might penetrate the external wall down the protective facing and back onto the external leaf, giving added protection from wind driven rain.

The board includes specifically designed rebated edge detailing on all four edges to allow the system to tightly interlock when installed. This engineered jointing of the insulation layer ensures continuity and results in excellent thermal bridging detailing.

Typical Physical Characteristics

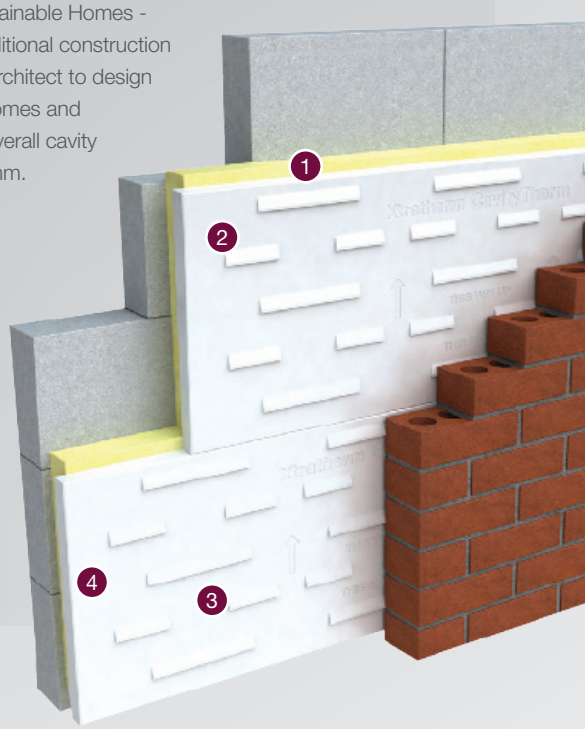
Property	Units
Density	30 kg/m^3
Compressive Strength	>100 kPa @ 10%
Thermal Conductivity	0.021 W/mk
Service Temperature	-20°C - +100°C

1
The profile edge of the boards allows wall ties to be positioned sloped down to the outer skin, whilst acting as a template for mortar on the inner skin.

2
Xtratherm CavityTherm has gas tight facings - with one additional face bonded to provide a drainage plane, directing moisture onto the outer leaf.

3
Xtratherm CavityTherm's specially designed profile maintains a residual channel, protecting the structure.

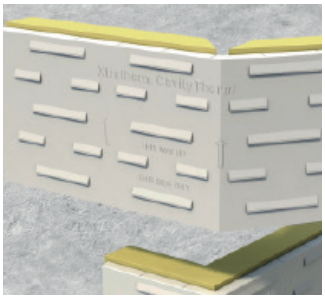
4
Installing Xtratherm CavityTherm gives U-values that are indicative of targets set to achieve the higher levels of the Code for Sustainable Homes - but within traditional construction allowing the architect to design low carbon homes and maintain an overall cavity width of 100mm.



Accessories

CavityTherm®

The Complete Cavity Wall System

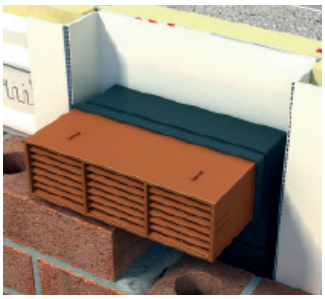


Preformed Corner Panels

A preformed panel of CavityTherm that folds to provide a 90° corner either external or internal. The corner boards ensure excellent detailing and provide a template for setting out of outer brickwork.

Size
1200mm x 450mm

Thicknesses
100mm, 125mm, 150mm



Service Void Panels

A preformed panel that creates an insulated Service Void for Periscopic Floor Vents in suspended floor situations.

Size
375mm x 265mm

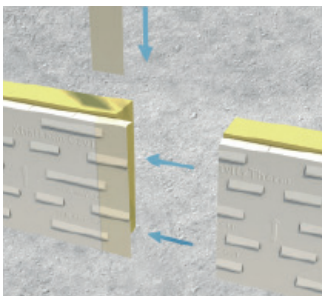
Thickness
45mm

Meter Box Panels

The preformed meter box accessory allows a recess space for placement of meter box, leaving the insulation to run in a continuous plane.

Size
1200mm x 600mm

Thicknesses
50mm, 75mm, 100mm

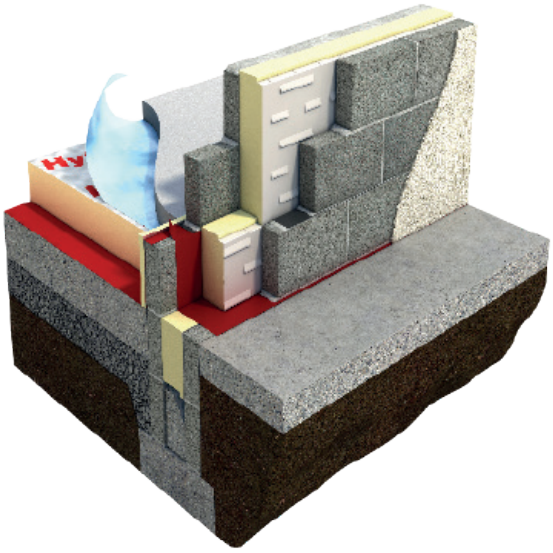


Jointing Strip

When building from the inner leaf to the outer leaf, board joints can be protected and taped with the jointing strips.

Size
100mm x 450mm

CavityTherm provides a ‘system’ that delivers on U-values, is practical, and with a full range of innovative detailing accessories – it delivers on continuity.

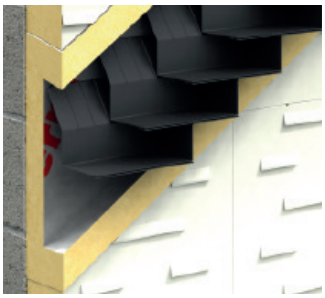


Hockey Stick Insulation

The Hockey service voids allows for easy access to the cable that supplies the meter box and is preformed to fit the insulation.

Size
1200mm

Thicknesses
100mm, 125mm, 150mm



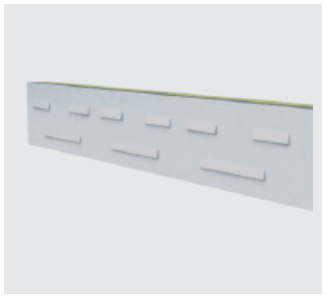
Cavity Tray Channel

An insulated channel to allow for insulation continuity around stepped cavity trays at gable junctions.

1200mm	L	Channel Length
100mm	C	Cavity width
350mm	IVH	Internal Void Height
60mm	T	PIR Insulation Thickness

Size
1200mm L x 100mm C x 350mm IVH x 60mm T

Thicknesses
100mm, 125mm, 150mm

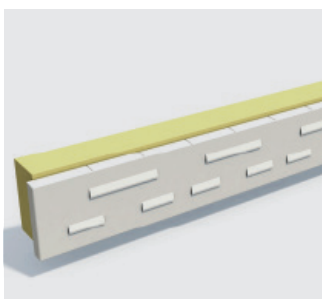


Top Panel

A CavityTherm half-board that is used to finish wall insulation heights when a full board is not required, reducing cost and wastage on site.

Size
1200mm x 225mm

Thicknesses
100mm, 125mm, 150mm



Riser Panel

A CavityTherm half-board that is positioned below the DPC at floor levels and allows for the recommended overlap between wall and floor insulation boosting thermal bridging performance and cutting waste.

Size
1200mm x 225mm

Thicknesses
100mm, 125mm, 150mm

Accredited Detailing

Like all other inputs into a building energy calculation, the way that insulation is installed to avoid thermal bridging has a numerical input into the software which is called a Y-value.

A set of 'good practice' details have been available in the form of 'Accredited Construction Details for Part L' (ACDs) published by the Department for Communities and Local Government (DCLG) in the UK. These details are a set of design drawings for the junctions listed in Appendix K Table K1 in the SAP 2012 Manual which are most prone to heat loss. They detail, using traditionally used UK construction methods and materials, how insulation should be installed at these critical junctions in order to improve not only the heat loss but also airtightness results. This also helps reduce the risk of condensation by ensuring surface temperatures are within a safe margin.

What is Thermal Bridging?

Thermal bridging occurs in small areas where the insulation level is reduced significantly compared with the remainder of the element. They may be 'Repeating,' 'Random,' or 'Non-Repeating.'

Where does Non-Repeating occur?

Non-repeating thermal bridges typically occur at the junctions between plane building elements, e.g. at wall / roof, wall / floor junctions, and around openings, e.g. at window jambs, sills and also corners where the continuity of the insulation is interrupted.

How is it accounted for?

Thermal bridges are calculated as a linear thermal transmittance value - PSI (Ψ) measured in W/mK. SAP is the software that is used to calculate a dwellings EPC rating. Within SAP Thermal bridging through junctions are accounted for as a 'Y-value.'

Are all junctions accounted for within SAP?

No. The major critical junctions are those that account for the majority of the heat loss. However reasonable care should be taken to insulate all bridges that occur on-site to avoid condensation.

y = 0.15 (Default)

The equivalent of an open 'Garage Door' 2.1m x 3.3m (6.93m²) opening.

y = 0.08 (Accredited Details)

The equivalent of an open 'Patio Door' 2.1m x 1.8m (3.78m²) opening.

y = 0.03 (Thermally Modelled Junctions)

The equivalent of an open 'Window' 1.25m x 1.25m (1.56m²) opening.

Thermal Bridging

A major factor in the performance of the building fabric is not simply the amount of insulation you install, but how it interconnects with other components and the other insulated elements within the design.

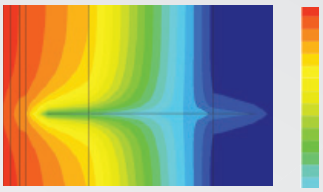
Semi-Detached House - TER 18.24

Total Envelope Area = 190.580

Which details to use?		**Accredited**	**Xtrathem**
Junction Detail	Length (m)	Ψ (W/m²K)	Ψ (W/m²K)
Lintels	13.970	0.30	0.03
Sills	12.170	0.04	0.04
Jamb	29.550	0.05	0.02
Ground Floor	19.600	0.16	0.05
Intermediate Floor	19.600	0.07	0.00
Corner (normal)	20.400	0.09	0.04
Corner (inverted)	10.200	-0.09	- 0.06
Ceiling (insulation at eases)	11.000	0.06	0.05
Ceiling (insulation at gables)	8.900	0.24	0.05
Party Ground Floor	8.900	0.04	0.04
Party Wall (intermediate floor)	8.900	0.00	0.00
Party Ceiling (insulation at ceiling)	8.900	0.06	0.05
Total L x Ψ		15.27	4.48
Y-Value (L x Ψ / total area)		0.08	* 0.02

*Ψ Based on Lightweight Block

Xtratherm has published a full set of accredited PSI values based on the DCLGs Accredited Details for Construction. Using these figures will allow most properties to use the Y-value of better than 0.05 which is targeted under FEES. For a set of full downloadable details and information on how to use them in your design go to www.cavitytherm.com

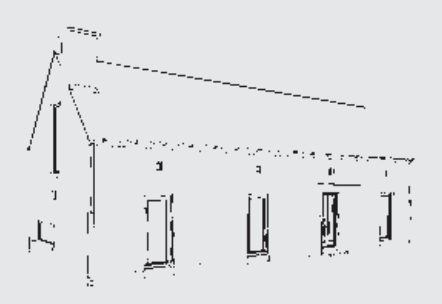


Building junctions, where building elements meet such as at corners or reveals, are less well insulated than the main element. With Xtratherm Accredited Details insulation continuity is assured.

It has been estimated that up to 30% of the heatloss in a well insulated house is through these 'Non Repeating Thermal Bridges' at wall / floor junctions, corners, reveals, ceiling junctions heads and sills etc, building regulations ask that this heatloss is measured and minimised.

As with every element/component within the energy strategy of a building design, U-values, air tightness, boiler efficiency etc, this 'Continuity' of insulation at the junctions has a numerical value within the SAP calculation tool – it's called the 'Y' value. From 2010 the Y-value must now be actually calculated by the building designer, with a target of around 0.04 achieving the Fabric Energy Efficiency Standards for Zero Carbon and the higher levels of the Code for Sustainable Homes.

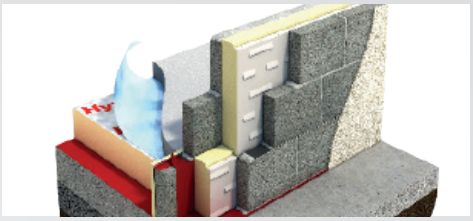
How the insulation system builds within a construction, how it interconnects at junctions and how it is witnessed and confirmed on site is of equal importance as U-values. Better U-value should not be used unless detailing is improved to match those levels.



Installation Guide

Procedure
Internal and external build methods

1 CavityTherm can be built into cavity walls where either the outer or inner leaf is built first. Riser boards should be used below DPC level to ensure a min 150mm overlap with the floor insulation. The receiving block should be plumb to provide a flat surface to accept the insulation.



2 Where required Radon barriers or DPCs should be dressed over the cavity either dissecting the board or dressed behind the riser boards and across the cavity below the insulation. The insulation should be butted tightly either side of the barrier to provide thermal continuity. Pre-formed detailing of radon barriers provides a more accurate solution.

3 As with setting out, installation should commence from adjacent corners using the Xtratherm pre-formed corner boards. Alternate Corner Pieces will achieve the offset brick bonded pattern for the insulation.

4 Install the first row of insulation boards, allowing for the floor insulation overlap, supported by at least 2 wall ties per board. Boards should be installed with the tongue upper most and the profiled face outer most, placed tightly against the inner face of the outer blockwork.

5 Wall ties conforming to Eurocode 6 - BS EN 845-1:2013 should be used and placed at approx. 600mm centres, do not place directly on the DPC.

6 The type and spacing of wall ties are dependent on geographical area, cavity width, wall length and height, and opening sizes. They should be placed at centres recommended by manufacturers to suit the wall specification and placed within the preformed notches of the CavityTherm.

7 In cavities up to 150mm, typically SS wire ties at 5/m^2 meet structural requirements, at these specifications the ties do not have a detrimental effect on the thermal performance (larger wall ties will reduce the thermal performance)

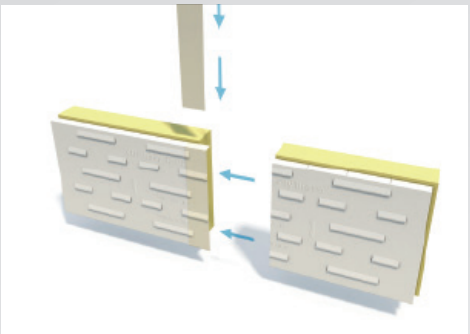
8 Slots should be cut into the exposed foam edge of the board to follow the sloped surface of the facing to allow the ties to run down towards the outer leaf.

9 Under Eurocode 6 it is recommended that no more than four courses of block are laid on the preceding skin before installation of the insulation. This allows for wall ties to be inserted accurately and without bending and thus distorting the physical characteristics of the wall ties. Ensure the wall is level and free of any protrusions before installing the insulation with all edges tightly interlocked.

10 Mortar should be struck from the inner cavity face of the block to ensure mortar squeeze is minimized on the cavity side. The two courses of blockwork can then be built, ensuring the mortar is struck back from the cavity face to prevent mortar squeeze. The second skin of block should be built tight against the CavityTherm.

11 All boards should be tightly interlocked with vertical joints staggered. Continue the installation until a reveal is reached or boards abut mid wall. To form a butt join, remove the end profile from the abutting board(s) and fit tightly against the cut edge of the adjoining board.

12 In the case of smaller sections of board being joined, when building from the outside, the junction can be taped with proprietary tape from Bostik or Venture Tapes. If building from the inside on smaller sections, tape can be applied and adjoined sections are lifted into the cavity. On larger sections, the Xtratherm jointing strip can be used, ensure the join is well butted. (see diagram)



Internal & external corners can be formed on site by either butt jointed or mitred methods. Preformed corners are also available from Xtratherm.

13 This pattern should be repeated with subsequent lifts repeating the position of the first board. Alternate boards should be cut to different lengths to create a brick bonded pattern if the corner boards have not been used.

14 It is recommended (to avoid piercing the boards with additional wall ties at reveal openings), that an additional wall tie is included within 225mm of the opening on each board course. Alternatively, the use of a return block with 50mm Xtratherm reveal strip allows for the wall ties to be placed directly behind the block without penetrating the CavityTherm board.

15 In accordance with Eurocode 6 a vertical DPC should be provided that extends 25mm beyond the width of the closer.

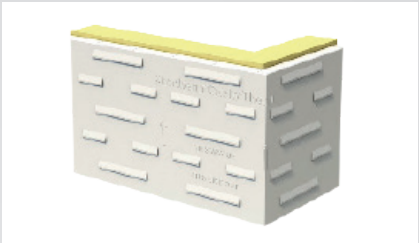
16 Continue installation to total wall height or if truncated, protect by an approved cavity tray, installed to manufacturer recommendations in accordance with Eurocode 6 CavityTherm should be separated from any flues with min 200mm of non-combustible material.

17 Where openings such as doors and windows are in close proximity, it is recommended that a continuous lintel or cavity tray is used. Damp-proofing at lintels, sills and penetrations must be provided with DPCs / Trays with stop ends and weep holes where required.

18 Acceptable Detailing must be followed and ensure that installation is in accordance with Part L and accounted for in the DEAP calculation for BER certificate.

19 At service voids and penetrations, bespoke detail pieces are available to provide insulation continuity. (see diagrams below)

20 Contact the Xtratherm Technical team for further resources on installation best practice such as on-site 'Tool Box Talk' training in on-line animations and instructions.



External corner

Internal corner

Corners

1 Preformed corner panels are available from Xtratherm and are recommended to ensure accuracy is achieved at this crucial junction. As per our BBA cert 10/4786, using the preformed corner boards dispenses with the requirement of incorporating a vertical DPC at this junction.

2 Internal & external butted corner details are formed by closely butting the boards. It is important that they are closely jointed, the end profile should be removed to create square edges then cut and flatten the profiled flutes 100mm in from the board edge.

3 Alternatively the boards are cut at an angle to create a mitred junction so that all interfaces are uninterrupted.

N.B. All alternative corner details where the preformed corner panels are not used should incorporate a vertical DPC, built in during the build process.

DPCs

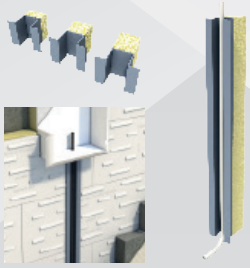
In accordance Eurocode 6 DPC design should be based on the assumption that rain will penetrate the outer leaf of the wall and run down the inside of the outer leaf. Where the cavity is bridged, e.g. by cavity fill, lintels, structural beams, floor slabs or pipes, there is a danger that water will be conducted across it to cause dampness inside the building. To avoid this problem, it is essential that watertight cavity trays are provided above all bridges of the cavity (other than wall ties), so that water is diverted to the outer leaf or clear of the bridges'.

Boards should be protected from weather during breaks in the installation.

CavityTherm is suitable for walls up to 25m in height.

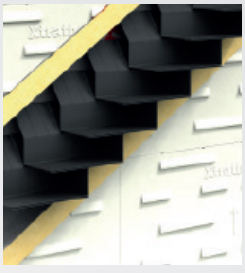
Full animations of board's features, jointing procedures and installation are available on the web site at http://cavitytherm.com/videos

Accessories Available



Xtratherm Hockey Stick Insulation

Service Void Panel



Insulated Cavity Tray Channel

FAQs

What is CavityTherm?

Xtratherm CavityTherm wall insulation board is a high performance composite board of PIR core with a lambda value of 0.021 W/mK. The boards have gas tight facings with one face bonded to a profiled HIPS skin during manufacture to provide a drainage plane. CavityTherm's unique profiled facing directs any moisture that might have penetrated the external wall down the protective facing and back onto the external leaf. The board includes specifically designed rebated edge detailing on all four edges to allow the system to tightly interlock when installed.

What is the real benefit using CavityTherm?

Put simply, the U-values achieved by placing CavityTherm into your standard 150mm cavity meets the Passive House standards for Ireland. It builds as a 'system to ensure continuity. You can physically see that the procedures on site are being followed. It's a very practical, affordable solution to low energy design.

What wall ties do I use with CavityTherm?

Standard S/S wire wall ties are used with CavityTherm. At up to 5 ties/m^2 the thermal impact is negligible because the cavity is kept to a reasonable width. Pushing the cavity wider and adding greater amounts of insulation will necessitate low conductivity ties, and result in worse thermal bridging at junctions. It is for this reason that a U-value of around 0.15W/m^2K is seen as optimum by regulations and Passive House.

Why slope the wall ties down to the outer face?

This is not specific to CavityTherm, all wall ties in any construction should slope slightly down to prevent water travelling along the wall ties into the construction.

Wall ties must be kept clean and free of mortar.

What thicknesses of CavityTherm are available?

CavityTherm is manufactured for 100mm, 125mm and 150mm cavities, and achieves U-values as low as to 0.12 W/m^2K. Greater thicknesses may be available subject to quantity and lead time.

What building types can use CavityTherm?

CavityTherm can be used in new external masonry cavity walls up to 25m in height in domestic and non-domestic buildings.

CavityTherm has a lot of accessories as part of the 'system', what are they for?

An excellent wall U-value is not the only item that must be addressed to achieve a Low Carbon Fabric. Airtightness and thermal bridging must also be improved. Thermal Bridging is in fact just 'good detailing' and is accounted for in SAP. Xtratherm is the only insulation board manufacturer that addresses gaps or breaks within the continuity of the insulation layer. How do you detail insulation around stepped cavity trays, periscope vents in suspended floors or at corners, or meter boxes? Xtratherm has developed bespoke insulated pieces to ensure that these details are well insulated so as to avoid thermal bridging and possible condensation mould growth.

CavityTherm addresses thermal bridging, but how do I use this in my SAP calculation?

All the details available to download from the CavityTherm web site have been based on the UK Accredited Details For Construction published by the DCLG. These are standard details that have been accounted for in SAP for over 5 years. What Xtratherm has done is just replaced the conventional insulation included within them with CavityTherm, this has vastly improved the resultant thermal transmittance through all the specified junctions; corners, wall/floor, reveals etc, and will deliver a Y-value for most dwellings below the 0.05 target asked for under Part L. Xtratherm has fully BRE qualified thermal bridging assessors, and all our technical staff you will speak to on the phone are certified by the BBA to carry out U-value and condensation risk analysis.

Is there a benefit in the 'Engineered edge detail'?

The Building Regulations now ask that insulation systems be 'continuous' and are installed in accordance with accredited detailing. The jointing system in Xtratherm products achieves this, encourages a more accurate build, and avoids the 0.01 U-value penalty that should be applied when calculating to BR443.

When a board is cut what tape do I use to make the join?

When two abutting boards are to join, cut the profiled edge from each board and ensure that they are closely butted. The joint should be sealed. When building the inner leaf first - seal with a waterproof tape. The tape should be applied to a dry surface. When building from the inside a preparatory self adhesive jointing strip is available to insert over the join. Any penetrations or small repairs can be made with the tape or sealant. Any services running through the insulation layer should be sloped to the outside. DPCs should be dressed over services as per Eurocode 6.

You recommend the use of a 'Cavity Board' – what is that?

The use of a cavity board is recommended during construction. It is a board that is placed over the installed boards as the inner leaf is raised to catch any mortar drops that might fall. If mortar does fall onto the upper edge of the CavityTherm the HIPS skin is easily cleaned with a damp cloth.

Where do I get further information?

Full details relating to compliance with Building Regulations, independently verified technical specification, assessment criteria and technical investigations, design considerations and installation guidance are available on the website **www.cavitytherm.com**

Expect More KNOWLEDGE

At Xtratherm we understand the importance of giving our customers the best technical advice.

We have taken the unique industry step of training every one of our technical team that deals directly with our customers, to the highest industry standards of competency in U-value calculation and condensation risk analysis. We have Thermal Bridging covered also; we were the first company in Ireland to be assessed and certified under the NSAI thermal modelling competency scheme, using the most comprehensive 3D software available.

Our team and products are certified in the UK and Ireland through the following certifications bodies:

- BRE Thermal bridging modelling competency certification
- NSAI Thermal modelling competency scheme
- TIMSA-BBA competency scheme for U-value calculation and condensation risk analysis
- BBA and NSAI certification of the Xtratherm insulation boards
- SAP and DEAP energy assessment

Our technical team can also provide:

- Thermal calculations
- Technical advice on building regulations in the UK and Ireland
- Technical papers on a variety of topics
- Certified CPDs
- BIM modelling
- NBS Specifications
- Educational resources for technical secondary and tertiary colleges

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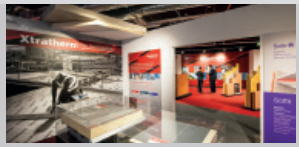
The **Xtratherm** Innovation Centre

The Xtratherm exhibition space and training academy has been developed to assist construction professionals in understanding the principles of specifying and achieving on-site, best practice insulation standards for new dwellings, commercial envelope solutions and refurbishment projects.




Get in touch

Dedicated Technical Team:
UK : 0371 222 1055

Thermal Calculations, Technical Advice or to arrange a technical visit:
info@xtratherm.com

Request a CPD:
cpd@xtratherm.com

Xtratherm®
More than insulation

The Sustainable Solution
Specifying Xtratherm is a real commitment to minimising energy consumption, harmful CO^2 emissions and their impact on the environment. Using our products is one of the most effective ways to reduce energy consumption – in fact, after just eight months the energy they save far outweighs the energy used in their production. In addition, our manufacturing facilities operate to an ISO 14001 certified Environmental Management System.

The BRE Green Guide
The 2008 Green Guide to Specification produced by the BRE gives Xtratherm Insulation products a rating of A or A+. Green Guide ratings are used to gain credits in BREEAM (BRE Environmental Assessment Method) for non-residential buildings, and under 'Mat 4 – Insulation' the first credit requires the building to have an Insulation Index of 2 or greater – only achievable if the weighted average rating of the insulation is A or A+. This shows that all our products have been made with materials that have been responsibly sourced. The standard sets out organisational governance, supply chain management and environmental and social aspects that are verified and ensure responsible sourcing of materials.

Responsible Sourcing
Xtratherm has BES 6001 certification for responsible sourcing. The second BREEAM credit under that category is based on responsibly-sourced materials – at least 80% of the total insulation used in roofs, walls, ground floors and services must meet any of tier levels 1 to 6 in the BREEAM table of certification schemes. Our Environmental Management System is certified under EN ISO 14001, and our raw materials come from companies with similarly-certified EMS (copies of all certificates are available for BREEAM assessments). This level of responsible sourcing meets tier level 6 in the BREEAM table.

Global Warming and Ozone Depletion
All Xtratherm Insulation products use CFC-and HCFC-free materials, and are manufactured using a blowing agent with a low GWP and zero ODP.

Good workmanship and appropriate site procedures are necessary to achieve expected thermal and airtightness performance. Installation should be undertaken by professional tradespersons. The example calculations are indicative only, for specific U-value calculations contact Xtratherm Technical Support. Xtratherm technical literature, Agrément certifications and Declarations of Performance are available for download on the Xtratherm website. The information contained in this publication is, to the best of our knowledge, true and accurate at the time of publication but any recommendations or suggestions which may be made are without guarantee since the conditions of use are beyond our control. Updated resources may be available on our websites. All images and content within this publication remain the property of Xtratherm.

PLATINUM SERVICE

Specifying products supported by the Xtratherm Platinum Service gives you the highest level of assistance from design stage to delivery of real performance on site, through the assurance of a validation process from calculation to installation.

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ISO 14001 | Environmental Management
OHSAS 18001 | Occupational Health & Safety

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