

February 2018

PITCHED ROOF SOLUTIONS

Insulation, airtightness and moisture management solutions for pitched roof rafter applications.



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Pitched Roof Solutions

Building extra living space within the attic is a great way to maximise the space within a house without increasing the footprint. It can create additional bedrooms, office space, playrooms and gives more flexibility for home owners.

Isover's insulation solutions for habitable loft spaces will help you create energy efficient buildings that provide a comfortable, healthy indoor environment.

And our intelligent, adaptable Vario® XtraSafe system will improve airtightness within the loft space and help protect the timber structure from moisture damage.



Regulations

The table below details the performance requirements stipulated by UK building regulations for a pitched roof within a new build or renovation home.

Country	Minimum standards for thermal U-values W/m ² K	
	New build	Renovation
England	0.2	0.18 extension/conversion.
Scotland	0.15	0.18/0.13 extension*, 0.25 conversion.
Wales	0.15	0.15 extension, 0.18 conversion.

* Lower U-value is required when existing wall and roof U-values are less than 0.70 and 0.25 respectively

Metac

Metac is a high performance glass mineral wool 'slab on a roll' providing excellent thermal and acoustic performance for pitched roof rafter applications. It is one of the most cost effective and easy to install solutions on the market.

When used with the Vario® XtraSafe system, it provides the best airtightness and moisture control solution for your roof living space.



Cost-effective - Great value solution compared to other insulation materials.



Flexibility - Available in 50-200mm thicknesses to suit a variety of rafter depths.



High performance thermal insulation - Thermal conductivity of 0.034 W/mK allows you to meet a wide range of U-values.



Airtightness and moisture management - Recommended to be used with Vario® XtraSafe system for the best result within the structure.



Excellent acoustic performance - Reduces unwanted noise from outside elements unlike other insulating materials.



Non-combustible - Isover glass mineral wool insulation has an A1 Euroclass fire rating - the best attainable.



Quick and easy to install - Friction fit between rafters (eliminating air gaps). Easy to handle and cut. No slumping. Reduces waste.



Recycled content - Manufactured from up to 80% recycled glass.

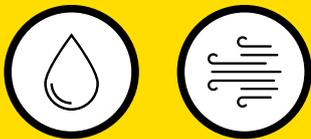


Order Code	Thickness	Width	Length	Lambda	Pack area	Packs per pallet
5200819227	50mm	1.2m	9.3m	34	11.16m ²	18
5200819232	125mm	1.2m	4.8m	34	5.76m ²	18
5200819233	175mm	1.2m	3.5m	34	4.2m ²	18
5200819234	200mm	1.2m	3.2m	34	3.84m ²	18

Vario® XtraSafe

Vario® XtraSafe is one of the most advanced airtightness and moisture management systems currently on the market. It helps to enhance the thermal performance of the building by removing unwanted draughts whilst protecting the building structure from damage caused by moisture.

Within pitched roof applications, the Vario® membrane is secured to the bottom of the rafters using Vario® XtraFix tape.

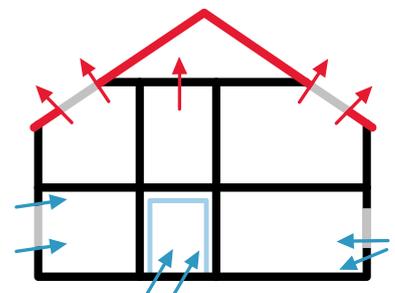


- Provides a total building airtightness solution, which can go “above and beyond” current regulations for both airtightness and moisture control.
- Prevents unintended air leakage through the building fabric, keeping the warm air in and the cold air out.
- “Smart Vapour Control Layer” adapts to relative humidity to help protect the building structure from moisture accumulation and allow it to dry out.
- “One man installation” reduces the total installed cost and makes the system exceptionally quick and easy to fit.
- Easy to adjust when fitting - simply remove and refit with no wastage, damage or hassle.

The art of airtightness

Airtightness refers to the amount of air that can escape or enter a building uncontrolled through unwanted gaps, cracks, holes and draughts. It can have a huge effect on a property’s thermal performance and also on occupant comfort as the warm air leaks out and cold air blows in.

Vario® XtraSafe is one of the most advanced airtightness and moisture management systems available, helping to control ventilation and putting a stop to unwanted draughts.





System Components

Vario® XtraSafe Membrane

Reinforced, laminated water vapour retardant climate membrane for sealing all construction components (floors, walls, roof) in both lightweight and solid constructions. Moisture variable S_d value of 0.3m - 25m. Includes pre-printed installation markings and a fleece backing for easy installation with XtraFix Tape.

- Roll = 40m x 1.5m
- Order no. 5200758985

Vario® DS Sealant

Durable elastic sealant in a handy cartridge. Used for producing airtight joints and junctions between Vario® XtraSafe membranes and floors, ceilings and walls, and for fixing overlapping seams in membranes.

- 310ml Cartridge (12 per box)
- Order No. 5200013894

Vario® MultiTape SL

Single-sided, flexible adhesive tape with a split release strip for producing durable airtight junction seals between overlapping sections of Vario® XtraSafe membrane, and joins with walls, roof, windows, pipes and other penetrations. The split release strip makes it easy to install in corners and difficult-to-access areas.

- Roll = 25m x 60mm (10 per box)
- Order no. 5200013892

Vario® XtraFix

Self-adhesive “hook” tape, for use in attaching fleece backed Vario® XtraSafe to all types of surface.

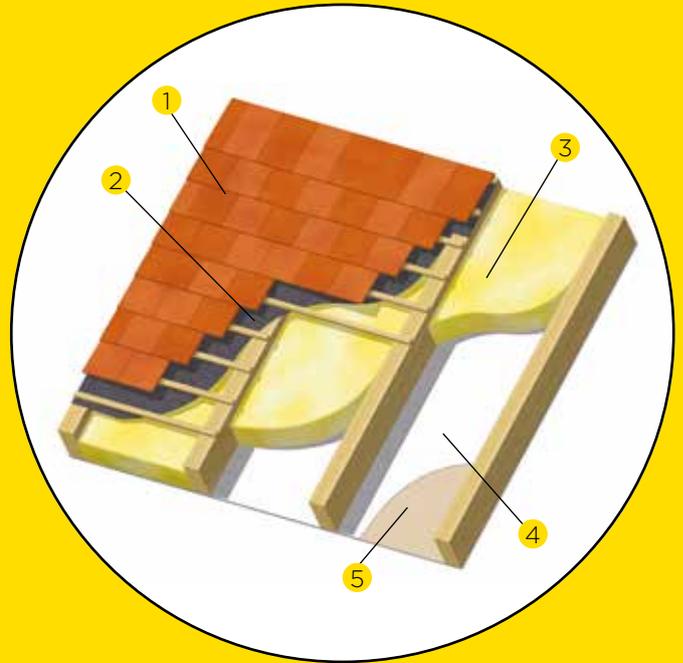
- Roll = 25m x 10mm (20 per box)
- Order no. 5200764485

Pitched Roofs

Insulation between rafters + Vario®

1. Tiled or slated roof on tiling battens
2. Breathable membrane
3. Metac insulation installed between rafters*
4. Vario® membrane + tapes
5. 12.5mm Gyproc WallBoard

*Ensuring a 25mm ventilation void is maintained between the insulation and membrane above.



Insulation between rafters	Vapour control layer	Board lining	U-value W/m ² K*
175mm Metac	Vario® XtraSafe system	12.5mm Gyproc Wallboard	0.22
200mm Metac	Vario® XtraSafe system	12.5mm Gyproc Wallboard	0.20

* Based on 38mm wide rafters at 600mm centres. The table above shows a selection of system details. For additional options, or for further guidance, please contact our Technical Advice Centre on 0115 945 1143.

Isover products



Metac Roll

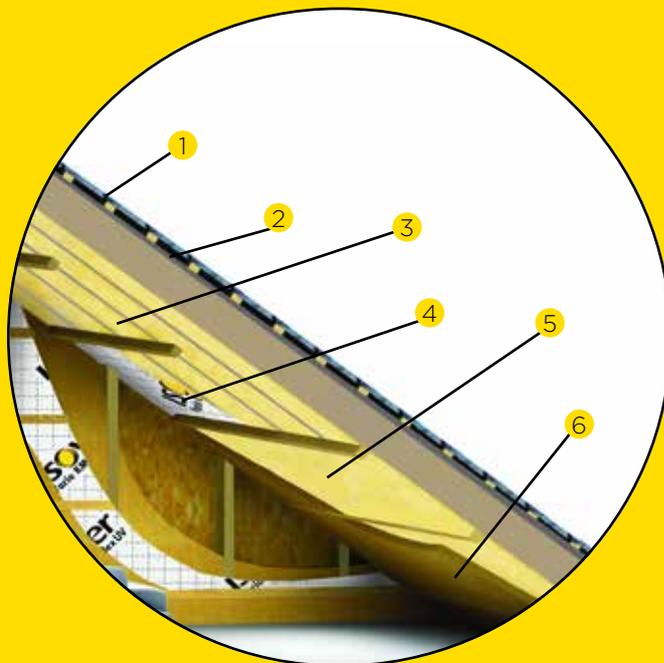


Vario® System

Pitched Roof with Internal Counter Batten

Insulation between rafters + Vario® + internal counter battens

1. Tiled or slated roof on tiling battens
2. Breathable membrane
3. Metac insulation installed between rafters*
4. Vario® membrane + tapes
5. Metac insulation between counter battens
6. 12.5mm Gyproc WallBoard



*Ensuring a 25mm ventilation void is maintained between the insulation and membrane above.

Insulation between rafters	Vapour control layer	Insulation between counter batten	Board lining	U-value W/m ² K*
125mm Metac	Vario® XtraSafe system	50mm Metac	12.5mm Gyproc Wallboard	0.21
175mm Metac	Vario® XtraSafe system	50mm Metac	12.5mm Gyproc Wallboard	0.17
200mm Metac	Vario® XtraSafe system	50mm Metac	12.5mm Gyproc Wallboard	0.15

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Isover products



Metac Roll



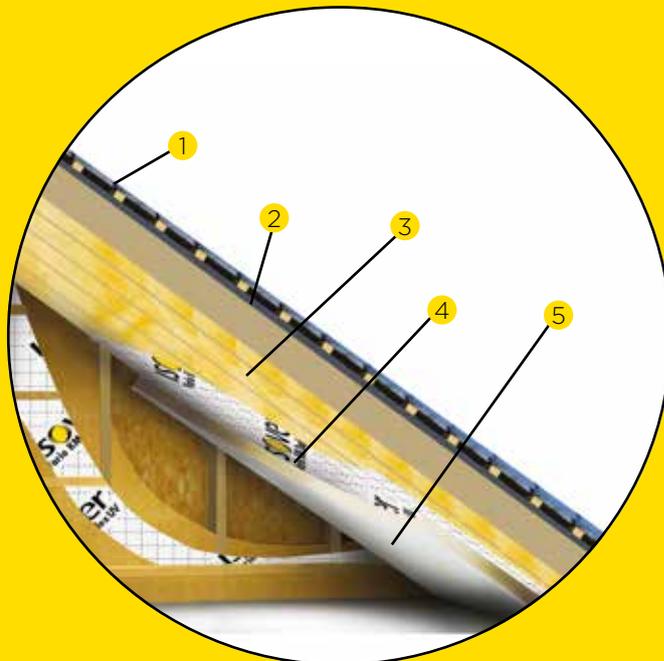
Vario® System

Pitched Roof with Thermal Laminate

Insulation between rafters + Vario® + Thermal Laminate.

1. Tiled or slated roof on tiling battens
2. Breathable membrane
3. Metac insulation installed between rafters*
4. Vario® membrane and tapes
5. Thermal Laminate

*Ensuring a 25mm ventilation void is maintained between the insulation and membrane above.



Insulation between rafters	Vapour control layer	Thermal laminate below rafters	U-value W/m ² K*
125mm Metac	Vario® XtraSafe system	53mm Gyproc ThermaLine PIR	0.19
125mm Metac	Vario® XtraSafe system	63mm Gyproc ThermaLine PIR	0.17
175mm Metac	Vario® XtraSafe system	53mm Gyproc ThermaLine PIR	0.15
175mm Metac	Vario® XtraSafe system	63mm Gyproc ThermaLine PIR	0.14
200mm Metac	Vario® XtraSafe system	63mm Gyproc ThermaLine PIR	0.13
200mm Metac	Vario® XtraSafe system	78mm Gyproc ThermaLine PIR	0.12

* Based on 38mm wide rafters at 600mm centres. The table above shows a selection of system details. For additional options, or for further guidance, please contact our Technical Advice Centre on 0115 945 1143.

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Metac Roll



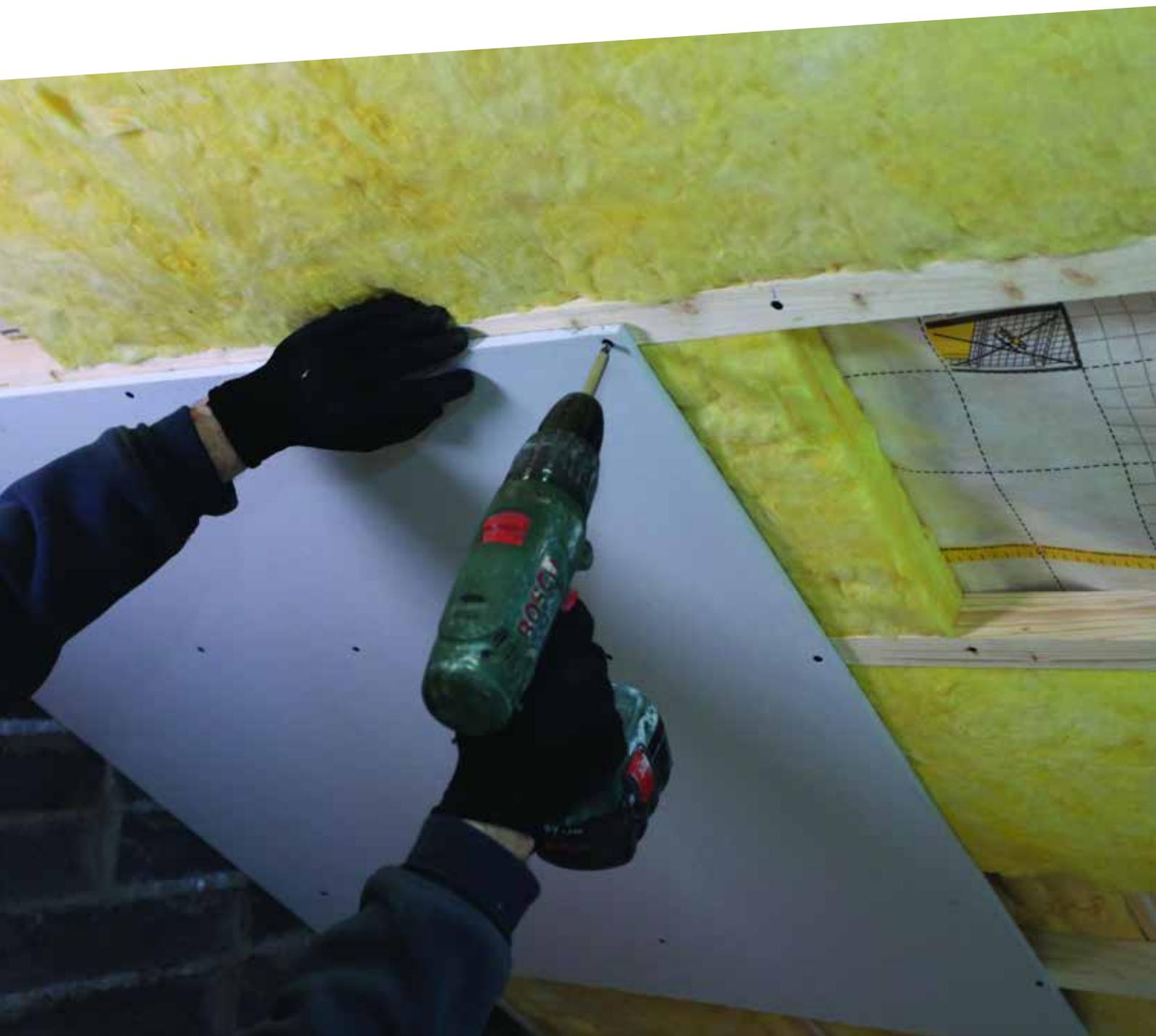
Vario® System



Thermal Laminate

Installation Guide

1. Measure and record both the vertical depth of the rafters and the horizontal width of the gap between rafters.
2. Lift the Metac into the attic whilst still in its packaging.
3. Measure and cut the roll with an insulation saw or insulation knife to fit the horizontal width of the gap between the rafters - adding an extra 10mm width to the Metac to allow for a snug fit.
4. Slit the packaging on the cut section of the roll to allow the Metac to unroll and allow full thickness recovery. Measure and cut the roll to the required length with a straight edge and sharp insulation knife.
5. Push and friction fit the Metac between the rafters, keeping the lower face of the Metac flush with the rafters. Ensure eaves ventilation is maintained where required.
6. Once rafters are filled with Metac, apply the Vario® XtraSafe vapour control layer (VCL) to the underside of the rafters, following the relevant instructions and recommendations.
7. If extra insulation is required below the rafters then install this once the VCL has been applied. Either insulated plasterboard can be used OR another layer of Metac can be installed within a layer of 50mm thick battens fitted to the underside of the rafters at 600mm centres. The latter has the benefit of creating a service void without penetrating the Vario® XtraSafe membrane.
8. Finally install plasterboard to complete the installation.





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