isover
SAINT-GOBAIN

PITCHED ROOF SOLUTIONS

Insulation, Airtightness & Moisture Management Solutions for Timber Frame Roof Structures

SAINT-GOBAIN

CONTENTS

PITCHED ROOF APPLICATION ISOVER METAC & VARIO® SYSTEM

Isover offers one of the safest options for insulating Pitched Roofs, both in New Build and Renovation projects.

Isover Metac is a high performance mineral wool insulation 'slab on a roll'. When used in conjunction with our Vario® Airtightness and Moisture Control System it offers a market leading solution in terms of thermal, acoustic and safety performance.

- **High performance** thermal insulation
- **Excellent acoustic performance**
- **A1 fire rating** highest rating on the market EN 13501-1
- **No slump** during installation and life of the system
- **Friction fits** in rafters eliminating any air gaps
- **Fully fill** Metac with our Vario® System
- **Vapour permeable insulation** for maximum protection from moisture and condensation issues
- **Excellent Indoor Air Quality** Eurofins Gold Comfort
- **Made from Recycled materials** up to 75% recycled glass

ACOUSTIC INSULATION · FIRE PROTECTION · MOISTURE CONTROL · BREATHABLE · MINIMAL WASTE · EASY TO TRANSPORT · ENERGY SAVINGS · EASY TO INSTALL · RECYCLED GLASS · PROTECTED PLANET · THERMAL INSULATION · EUROCLASS A1 FIRE RATING

W/mK 0.031-0.034

INDOOR AIR COMFORT eurofins GOLD CERTIFIED PRODUCT

CE

Where to use

Residential

New and Old

STANDARDS AND CERTIFICATION

Quality	We hold a Quality Management Standard EN ISO 9001: 2015 for manufacturing.
CE	All products are manufactured in accordance with the CE marking requirements under the Construction Products Regulation.
Product Standards	All products are manufactured in accordance with product standard: EN 13162:2012+A1:2015 and EN 13172 Evaluation of Conformity.
Environment	Isover is an ISO 14001:2015 (Environmental Management System) accredited manufacturing facility. This accreditation ensures that all products are manufactured to the stringent standards set out by this management system.
Indoor Air Quality	Awarded the highest standard in indoor air quality - Eurofins “Gold” Label The Gold Certificate means that Isover mineral wool is certified as an outstanding material in terms of Indoor Air Quality emissions regulations.
Durability	Fire Performance Euroclass classification of the product is related to the organic content, which cannot increase with time. Thermal conductivity of mineral wool products does not change with time, experience has shown the fibre structure to be stable and the porosity contains no other gases than atmospheric air. (See std EN13162:2012 Annex ZA,Table ZA.1) Will not accelerate corrosion with steel, copper or aluminium. Will not sustain vermin, nor breed or promote fungi or bacteria.
Responsibly Sourced	Our products have been manufactured to BES60001 to ensure their constituent materials have been responsibly sourced.

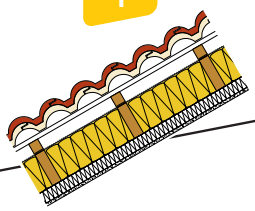
CE

CONTROL OF CONDENSATION AND VENTILATION

Isover complies with BS 5250:2016 code of practice for control of condensation in buildings & SR 82: 2017 Code of Practice for Slating and Tiling. These are the industry standards to ensure the building fabric is protected from moisture and condensation damage. This is achieved by ensuring adequate vapour control and ventilation measures are installed.

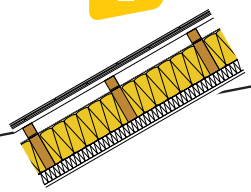
Good Practice Details

1



- Concrete tiles or natural slates (air-open)
- Slating laths
- Counterbattens (for roof drainage)
- LR (breathable) roofing felt
- Full fill Isover Metac insulation
- Vario® KM Duplex or Vario® Xtra Intelligent Airtightness VCL
- Isover InLiner Board

2



- Fibre cement slates (air-closed)
- Slating laths
- Ventilated counter batten space
- LR (breathable) roofing felt
- Full fill Isover Metac insulation
- Vario® KM Duplex or Vario® Xtra Intelligent airtightness VCL
- Isover InLiner Board

The Standards Cover

- Dealing with high moisture levels and condensation to protect the building fabric.
- Ensuring a sufficiently permeable roof build up i.e. use of an adequate breathable roofing felt in conjunction with an air-open roof covering (e.g. natural slates or concrete tiles not fibre cement).
- Addressing the risks associated with excessive humidity in buildings, notably mould growth and condensation.
- Recommending best practice construction, counterbattens as above the roof membrane allows for better drainage of rain water and can accommodate ventilation under non-air-open coverings where ridge and eaves vents are provided over the felt.

Isover Pitched Roof Solutions - How do they comply with these industry standards?

- Protecting Building Fabric - Managing moisture vapour.
- Healthy Indoor Air Quality - Dealing with mould growth and condensation.
- Energy Savings - Creating an airtight construction.
- Full Isover Solution - High performance mineral wool insulation and airtightness, moisture control.

New Build U-Values:
0.16 Pitched Roof

Renovation U-Values:
0.25 Pitched Roof

BUILDING REGULATIONS REPUBLIC OF IRELAND

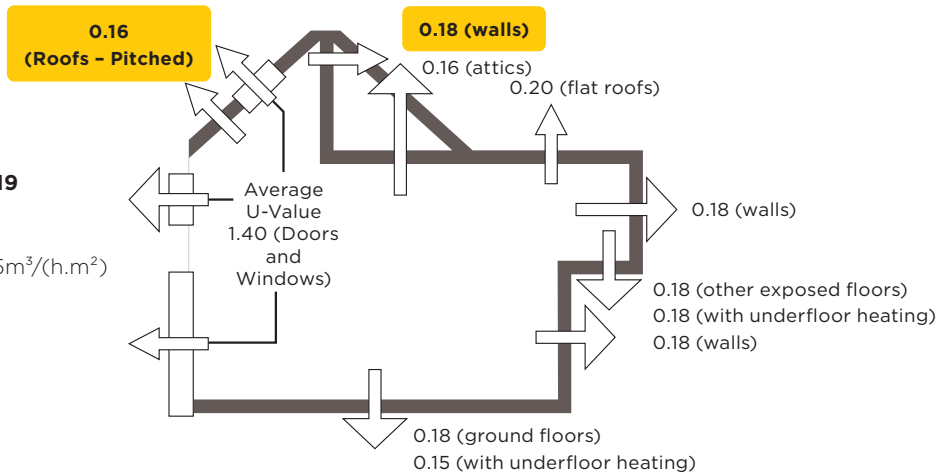
The following is a guide to thermal building regulations for new & existing dwellings, delivering comfort and energy savings through effective thermal insulation.

Republic of Ireland

New Dwellings TGD – Part L – 2019

Minimum standards for U-Values

Upper limit for air permeability is $5m^3/(h.m^2)$

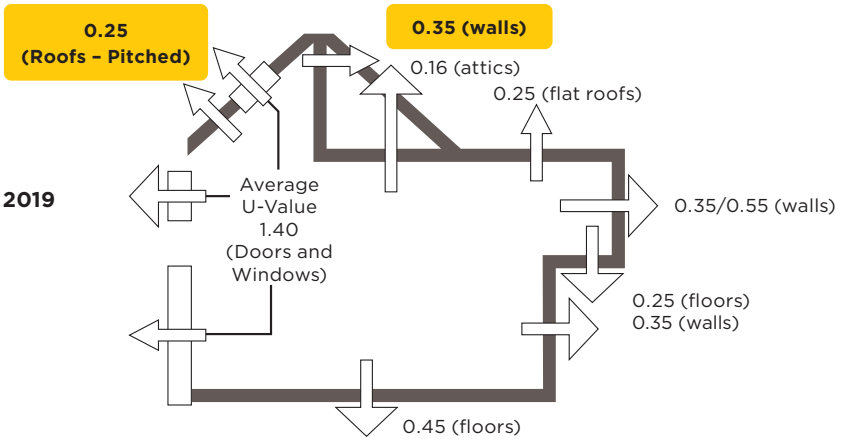


For more information you can contact our technical team on free phone (ROI) 1800 744480 or go to www.isover.ie

Republic of Ireland

Existing Dwellings TGD – Part L – 2019

Minimum standards for U-Values



For more information you can contact our technical team on free phone (ROI) 1800 744480 or go to www.isover.ie

Contact our technical team for more info

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1800 744480

NI
0845 399 0159

EMAIL
tech.ie@saint-gobain.com

New Build U-Values:
0.20 Pitched Roof

Renovation U-Values:
0.18 Pitched Roof

BUILDING REGULATIONS NORTHERN IRELAND

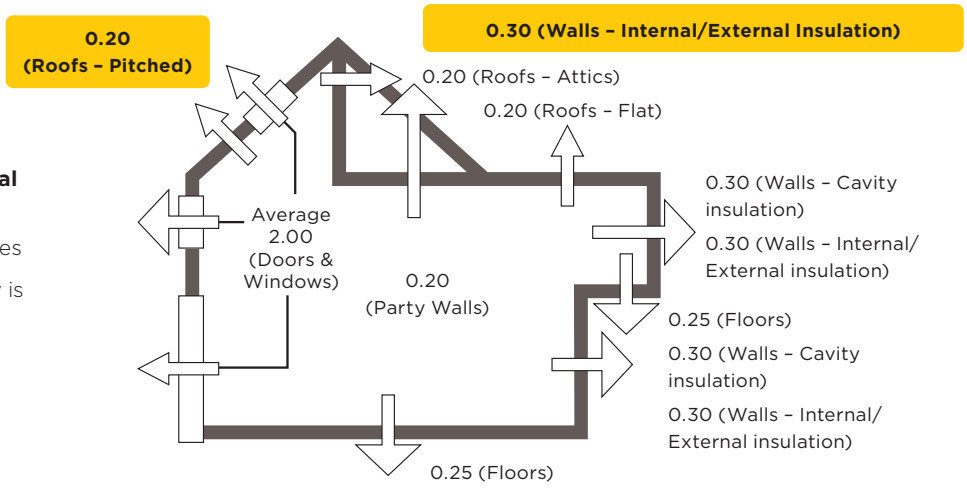
The following is a guide to thermal building regulations for new & existing dwellings, delivering comfort and energy savings through effective thermal insulation.

Northern Ireland

New Dwellings – DFP Technical Booklet F1:2012

Minimum standards for U-Values

Upper limit for air permeability is $10m^3/(h.m^2)$



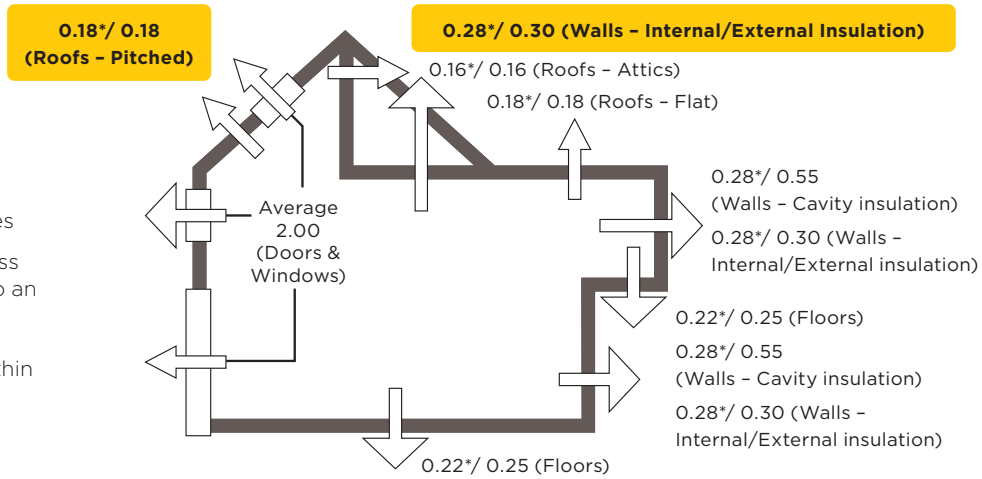
For more information you can contact our technical team on phone (NI) 0845 339 0159 or go to www.isover.ie

Northern Ireland

Existing Dwellings – DFP Technical Booklet F1:2012

Minimum standards for U-Values

These regulations are split across new thermal elements added to an existing dwelling, for example a new extension or dormer & upgraded thermal elements within the existing building.



*figures refer to a new element added to an existing dwelling i.e. extension, dormer etc.

For more information you can contact our technical team on phone (NI) 0845 339 0159 or go to www.isover.ie

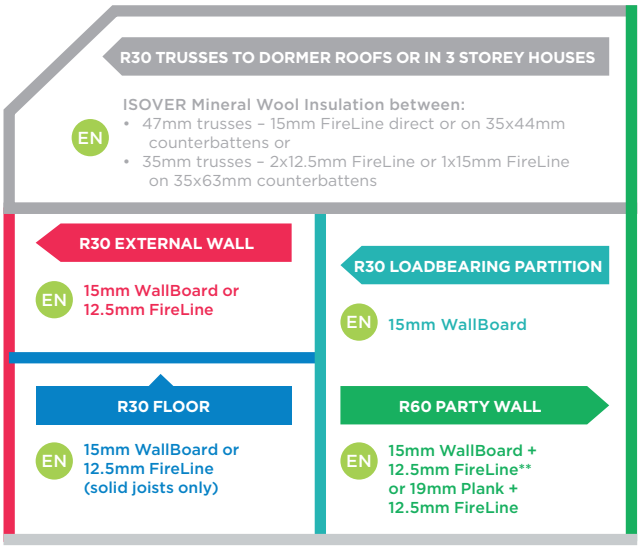
FIRE PERFORMANCE IN TIMBER FRAME BUILDINGS

JULY 1ST 2017

EN Standards instead of BS

As of July 1st 2017, new Building Regulations require fire protection of structural building elements in dwellings to be assessed under EN standards instead of British Standards (BS). The EN test uses a furnace that burns hotter/faster than the 'national' British Standard, BS 476 which means that building elements are subject to more onerous conditions and may need higher specifications as a result.

Gyproc® plasterboard linings on example timer frame construction*



Supplementary Guidance to TGD B (Fire Safety) Vol 2, 2017. Issued Sept 2020.

Guidance on Timber Frame Walls

"The build-up including linings must be carried out in the factory for all separating walls."

An Roinn Tithíochta, Pleanála agus Rialtais Áitiúil
Department of Housing, Planning and Local Government

* This construction is specific to the relevant test evidence including loading, insulation, noggings, firestopping, fixing centres and counter battens. Designers must ensure the tested system is consistent with the built construction.

**OSB sheathing to cavity.

Alternatives must be based on complete & relevant fire test evidence.

Visit the Technical Academy for our free courses on fire: **www.saint-gobain.ie/technical-academy/courses-cpds**

For full system description, please refer to our Timber Frame Guide or contact the Saint-Gobain (Isover) Technical Department.

TECHNICAL ACADEMY

Free Phone (ROI): 1800 744480
Free Phone (NI): 0845 3990159
Email: tech.ie@saint-gobain.com

TECHNICAL ACADEMY

Sign Up TODAY!

Get the **know-how** with the **Saint-Gobain Technical Academy**

With purpose built facilities, dedicated resources in Kingscourt and Dublin as well as NEW Online Training, Saint-Gobain Technical Academy offers a wide range of FREE training courses and webinars to upskill and educate construction industry professionals.

The mix of interactive training, live demo and theory courses include:

- Airtightness and moisture management
- Acoustics in Buildings
- Dry lining systems for installers and supervisors
- nZEB in Practice
- Fire performance in buildings
- Renovation solutions
- ROI Building Regulations & Compliance
- Internally insulating existing external walls: The challenges faced and a possible solution

...and much more

Sign up for our NEW Online Training Courses at

www.saint-gobain.ie

REGISTER NOW

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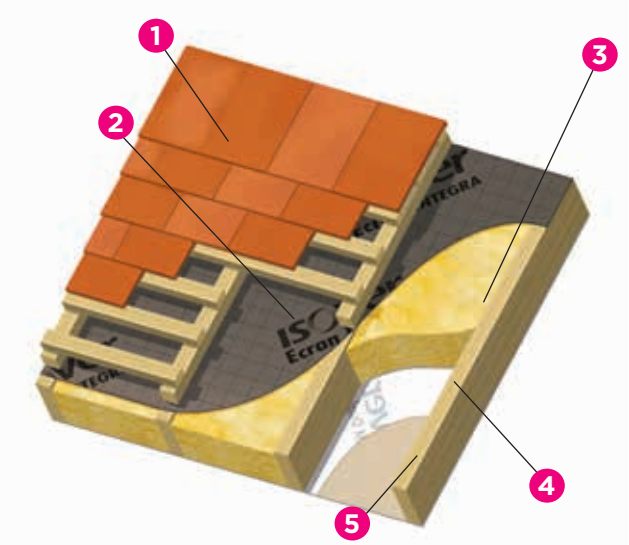
If renovating or converting your attic, Isover Metac easily exceeds renovation regulations!

PITCHED ROOFS

Pitched Roof insulation full filled between rafters + Vario®

1. Tiled or slated roof with external counter battens/ ventilation space*
2. Low resistance Underlay per BS 5250
3. Isover insulation installed between rafters
4. Vario® System
5. Gyproc WallBoard

Isover Metac is a high performance mineral wool insulation 'slab on a roll'. When used in conjunction with our Vario® Airtightness and Moisture Control System it offers a market leading solution in terms of thermal, acoustic and safety performance. If also combined with Isover InLiner Board you have the complete mineral wool pitched roof solution. Isover InLiner Board is a super dense, rigid and high performance laminated Insulated Plasterboard.



Insulation in rafters (mm)	Airtightness/ Moisture Control	Board lining	U-value W/m²K for 400 centres	U-value W/m²K for 600 centres
Metac 031 180mm	Vario® System	12.5mm Gyproc WallBoard	0.21	0.19
Metac 034 220mm	Vario® System	12.5mm Gyproc WallBoard	0.18	0.17
Metac 034 150mm x 2	Vario® System	12.5mm Gyproc WallBoard	0.14	0.13
Metac 031 140mm & 034 150mm	Vario® System	12.5mm Gyproc WallBoard	0.14	0.13

Any values are indicative, please contact our technical support team for values pertaining to your project.

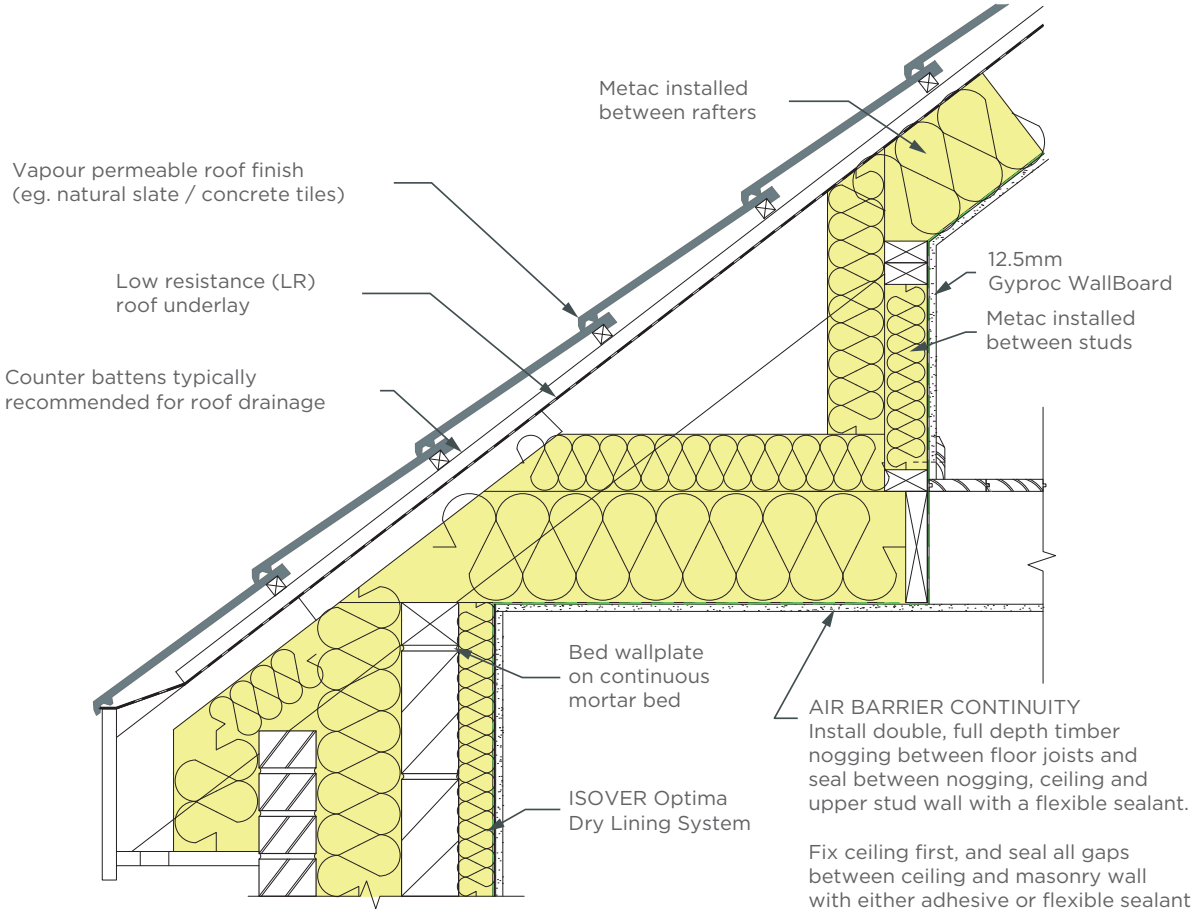
Isover Products

Metac Roll

+

Vario® System

Application CAD Details

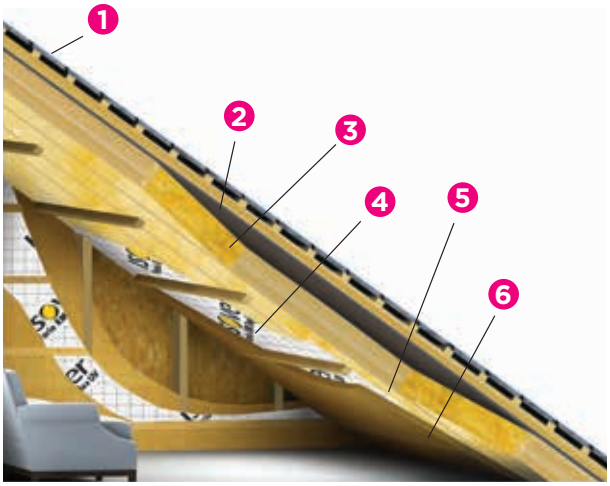


Note:
Not all standard construction details are shown on this drawing. If unsure about any detail check with site engineer.

PITCHED ROOF WITH INTERNAL COUNTER BATTENS

Insulation full filled between rafters + Vario® + internal counter battens

1. Tiled/natural slate roof tiling battens or counter battens where required
2. Low resistance underlay
3. Isover Metac Insulation friction fit between rafters
4. Isover Vario® membrane and tapes applied under the rafters
5. Isover insulation between 50mm counter battens
6. Gyproc plasterboard as specified in the performance tables



Truss width (min.)	Gyproc Plasterboard Type	Airtightness Layer	Rafter Depth	Insulation in Rafters	Insulation below rafters	Secondary framing below rafters	Noggings*	U Value 600mm c/c	U Value 400mm c/c
30 Minutes Fire Resistance (Typically 3 storey dwellings, as well as 2 storey attic spaces intended for conversion to habitable spaces, and 2 storey dwellings with Dormer Truss Roofs)									
47mm	1 x 15mm FireLine	Vario® KM Duplex & Tapes	175mm	Metac 031 180mm	Metac 034 50mm	50 x 44mm counter battens	Not required	0.16	0.17
47mm	1 x 15mm FireLine	Vario® KM Duplex & Tapes	175mm	Metac 031 180mm	Metac 034 50mm	As required for insulation	35x63mm (min)	0.16	0.18
47mm	1 x 15mm FireLine	Vario® KM Duplex & Tapes	200mm	Metac 034 2 x 100mm	Metac 034 50mm	35 x 63mm counter battens	35x63mm (min)	0.15	0.17
47mm	2 x 12.5mm FireLine	Vario® KM Duplex & Tapes	200mm	Metac 031 180mm	Metac 034 50mm	As required for insulation + 35 x 44mm service battens	Not required	0.15	0.16
35mm	2 x 12.5mm FireLine	Vario® KM Duplex & Tapes	200mm	Metac 034 2 x 100mm	Metac 034 50mm	As required for insulation + 35 x 44mm service battens	Not required	0.15	0.16

*Timber noggings of the minimum size stated are required to maintain support and fixing grounds to all plasterboard edges, both around the perimeter and in the field of the installed ceiling below rafters.

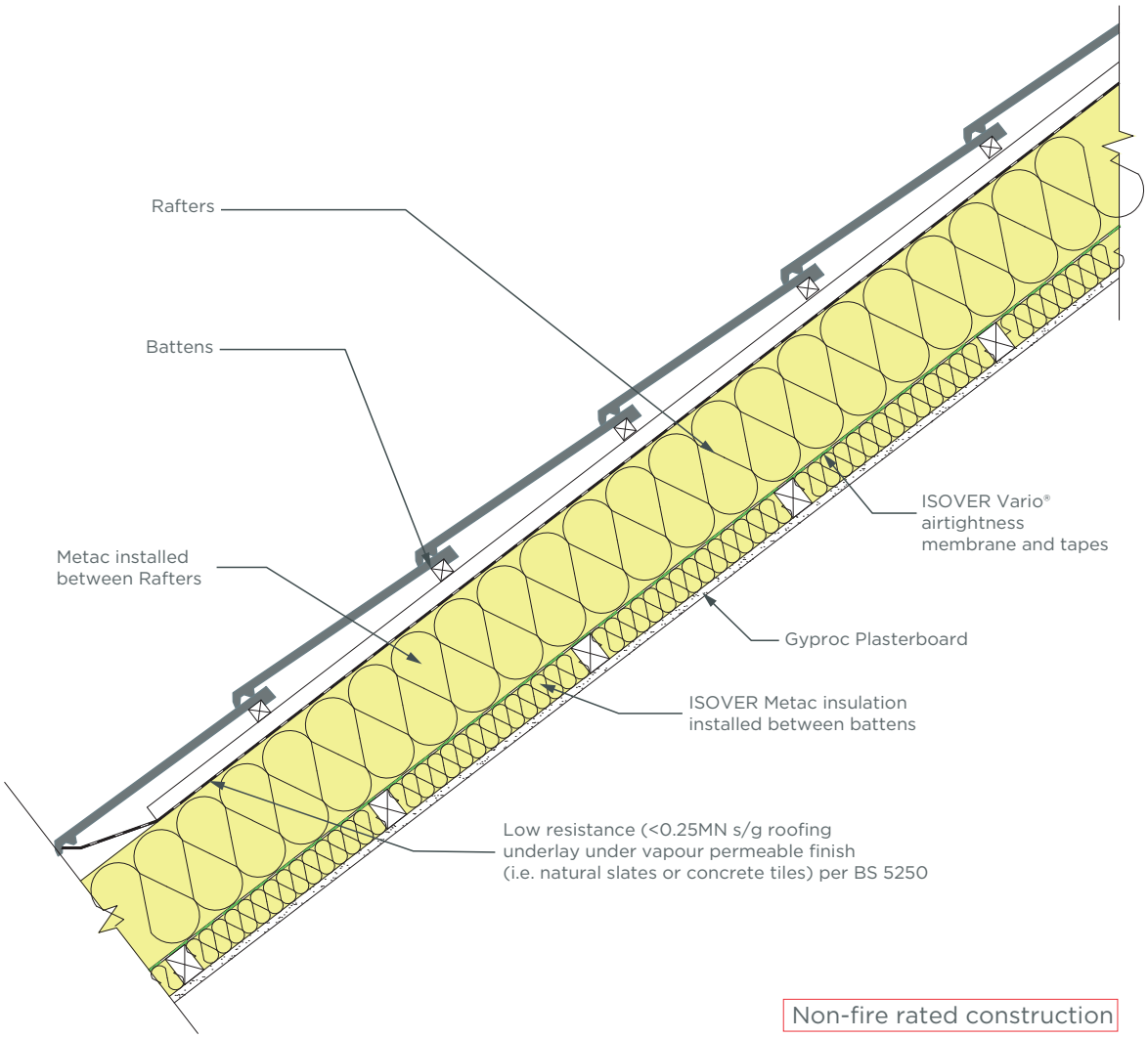
Isover Products


Metac Roll


Vario® System


Comfort Roll 35

Application CAD Details



Note:
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INSTALLATION PITCHED ROOF WITH COUNTER BATTENS

1

Measure depth and width of rafters. Then measure the length and width of the building and multiply twice the span of the rafters by the length of the building.

2

Lift Metac into the attic still in its packaging.

3

Measure and cut the roll to fit rafter width leaving 10mm extra on dimension.

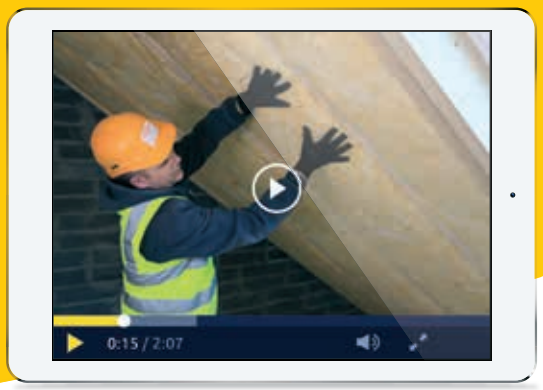
4

Unroll and allow full recovery, use a straight edge and sharp insulation knife. Push and friction fit the insulation between the rafters.

Want to know more?

Watch our install videos

www.youtube.com/isoverireland



5

When rafters have had insulation installed, proceed to install membrane and counter battens. Ensure eaves ventilation is left where required. Metac can be fully filled between rafters when used with our Vario® Xtra membrane installed below the insulation.

6

To increase the U-value, Isover recommends installing 50 × 50mm counter battens filled with 50mm Metac – this allows a service zone without need to pierce airtight membrane.

7

Push and friction fit between counter battens,

8

Finally use Gyproc plasterboard applied to counter battens to complete the installation. This combined with our Vario® Membrane and Metac, provides the safest solution to protect timber rafters from moisture damage.

ISOVER METAC ROLL 031

For use in Pitched roof attics • Pitched roof rafters • Walls internally insulated

Product Features

1. Thermal conductivity 0.031 W/mK
2. Excellent acoustic performance
3. Excellent fire safety - A1 fire rated
4. Vapour permeable breathable insulation
5. Improves energy performance and reduces heating & cooling costs
6. Easy to install. Friction fits between timber stud, joists and rafters with no need for additional fixings
7. Made from recycled glass. Minimal manufacturing and on-site wastage. Low carbon footprint at manufacture and during transport

An extra high performance quality thermal insulation roll designed for a wide range of applications where space is at a premium.

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Our Best Mineral Wool Roll W/mK 0.031

Product	Order Code	Thickness (mm)	Width (mm)	Length (mm)	Pack Area (m2)	Pack Per Pallet
Isover Metac	**5200899796**	90	1200	5400	6.24	18
Isover Metac	**5200841098**	140	2 x 600	3500	4.2	18
Isover Metac	**5200861944**	140	3 x 400	3400	4.08	18
Isover Metac	**5200868092**	180	1250	2700	3.375	18

Where to use

Pitched roof rafters

Walls internally insulated

ISOVER METAC ROLL 034

For use in Pitched roof attics • Pitched roof rafters • Walls internally insulated

Product Features

1. Thermal conductivity 0.034 W/mK
2. Excellent acoustic performance
3. Excellent fire safety - A1 fire rated
4. Vapour permeable breathable insulation
5. Improves energy performance and reduces heating & cooling costs
6. Easy to install. Friction fits between timber stud, joists and rafters with no need for additional fixings
7. Made from recycled glass. Minimal manufacturing and on-site wastage. Low carbon footprint at manufacture and during transport

A high performance quality thermal insulation roll designed for a wide range of applications where space is at a premium.

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W/mK 0.034

Product	Lambda Value	Product Code	Thickness (mm)	Width (mm)	Length (mm)	Roll Area (m^2)	Rolls Per Pallet
Isover Metac	0.034	**5200771695**	50	1200	9300	11.16	18
Isover Metac	0.034	**5200771696**	100	1200	6000	7.20	18
Isover Metac	0.034	**5200765192**	150	1200	4100	4.92	18
Isover Metac	0.034	**5200771700**	150	3 × 400	4100	4.92	18
Isover Metac	0.034	**5200771705**	180	1200	3400	4.08	18
Isover Metac	0.034	**5200771708**	180	3 × 400	3400	4.08	18
Isover Metac	0.034	**5200765193**	220	1200	2900	3.48	18
Isover Metac	0.034	**5200852270**	220	3 × 400	2900	3,48	18

Any values are indicative, please contact our technical support team for values pertaining to your project.

NOTES

NOTES

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March 2023