



# DRY LINING SOLUTIONS

Optima Dry Lining System

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# THE OPTIMA DRY LINING SYSTEM

## What is Optima?

Optima is the high performance solution for insulating new and older houses from the inside. Essentially, it's an innovative Dry Lining System developed by insulation specialists Isover to significantly improve thermal and acoustic insulation.

Our insulation products are renowned for their quality and reliability. Optima is designed specifically for homes where outer façade or wall cavity insulation is simply not a viable option.

Optima addresses this with an easy-to-install, cost-effective, high performance alternative for renovating and insulating external walls from the inside.



## Why choose Optima?

Optima is ideal for use in conservation of old buildings where there is solid wall construction, as it uses traditional, natural materials: mineral wool insulation and gypsum board, which do not need to be glued and thus, do not impact on the existing structure. The system further mitigates impact on the building by accommodating new services, and is designed for deconstruction with the mineral wool, clips and steel frame highly suitable for reuse.

Additional key benefits are presented below:

- ✓ Excellent thermal and acoustic performance
- ✓ Eliminates thermal bridges
- ✓ Adjustable system addresses all wall types and issues
- ✓ Dry, clean, lightweight system with minimal waste, enabling rapid construction times
- ✓ Airtightness & moisture control feature
- ✓ Economical



**NSAI**



## Where to use



Residential



Non Residential



New and Old

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



# 1<sup>ST</sup> NSAI CERTIFIED SYSTEM IN IRELAND – WHAT DOES IT REALLY MEAN?

The Isover Optima Dry Lining System is the 1st NSAI Certified System in Ireland which is a big recognition but what does it really mean?

NSAI Agreement Certification establish proof that the certified products are ‘proper materials’ suitable for their intended use.

## Optima minimises the risk of condensation

Now required for internal insulation of solid walls under BS 5250, the Code of practice for control of condensation in buildings, Isover Ireland has carried out a dynamic condensation and moisture risk analysis. The study was conducted on different external wall substrates in two locations in Ireland (Dublin and Cork) using the method specified in I.S. EN 15026 Hygrothermal performance of building components and building elements - Assessment of moisture transfer by numerical simulation. Risk analysis proved that the Optima Dry Lining System mitigates the risk of condensation. Keeping in mind the potential consequences of condensation in the building such as mould growth, insulation degradation, poor air quality, health problems, construction damage; avoiding it should be one of the main considerations when reviewing Dry Lining Systems. Better insulation, draught-proofing on doors and sealing windows minimise draughts and stop heat escaping from the building which is hugely important from the energy saving perspective. However, those actions can also reduce water vapour escaping that leads to increased condensation risk. Optima decreases that risk significantly due to Vario® intelligent membrane which helps with airtightness as well as moisture management and construction breathability.

## Optima eliminates thermal bridges

The linear thermal transmittance “ (Psi) describes the additional heat loss associated with junctions and around openings. As part of the NSAI assessment process, the Isover Optima Dry Lining System was applied to a range of typical external wall build-ups and both the -value and temperature factor (fRsi) were calculated for all junctions. When installed in accordance with these details thermal bridging will be minimised and local condensation problems will be mitigated.

Traditionally, Dry Lining Systems that are using PIR boards are installed with metal mushroom fixings which create thermal bridging. Thermal bridging can lead to further heat losses and summer heat gains for conditioned spaces in buildings. Moreover, if the indoor environment is not adequately ventilated, thermal bridging may cause the building material to absorb humidity into the wall, which can result in mould growth (as demonstrated in the photo below).

Contact our Technical Department to obtain a copy of the NSAI certified thermal bridge details and Contractor Survey/ Installation guidance.



# WHY CHOOSE ISOVER MINERAL WOOL?

**Healthy Indoor Environment** = Eurofins Air Comfort Gold Award

**Soft Touch** = Gentle to Install

**Excellent Recovery & Strength** = No Slumping and High Tear Strength

**Natural Materials** = Made from Recycled Materials, No Odour

**Low Dust** = Pleasant Installation

**A1 Fire Rating** = Highest Rating for Insulation Materials

**Cost effective** = No wastage, installed in less time

**Simple to use** = User friendly rolls for easy installation at home



## NEED HELP? DO YOU HAVE A QUESTION?

Contact our technical team:

ROI: 1800 744 480

NI: 0845 399 0159

tech.ie@saint-gobain.com

**www.isover.ie**

 **isover**  
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# OPTIMA DRY LINING SYSTEM OVERVIEW





## I. Metal frame

1. Optima Floor and Ceiling U-channel
2. Optima 500mm Extension
3. Optima 2.4m C-channel
4. Optima Clip system: Optima Support (for new walls) or Optima Direct Support (70 – 160) (for renovation walls)

## II. Insulation

5. Isover insulation material, e.g. Standard Performance Comfort Roll 35 (0.035W/mK) or Ultra Performance Comfort Panel 32 (0.032 W/mK)

## III. Airtightness & Moisture control layer

6. Vario® DoubleTwin
7. Vario® KM Duplex UV airtightness & moisture control layer
8. Vario® KB1 one-sided adhesive tape
9. Vario® DoubleFit+

## IV. Facing

10. Gyproc Plasterboard (Various specifications of boards available)



9

10





*For further details view our*

**OPTIMA INSTALLER GUIDE**



Visit [isover.ie](https://isover.ie) or scan QR code



## BASIC INSTALLATION STEPS

1



Secure 2.4m C-channel

2



Secure Floor and Ceiling

3



Fix plastic clip on horizontal C-channel

4



Hang insulation on plastic clips

5



Fix plastic clip on vertical C-channel, adjust until plumb and lock in place

6



Fix Vario® and accessories

# INSTALLATION AND DESIGN CONSIDERATIONS

The dwelling should be surveyed initially to identify the key characteristics of the building; most importantly the wall construction, its overall condition and penetrations. Wall features, thermal bridges, ventilation requirements, reveals, signs of damp and suitability for fixings should be assessed as key parts of the appraisal.

Certain wall types, such as single leaf solid brick or stone walls require more careful attention. The more porous the wall construction, the greater the risk of interstitial condensation (i.e. within the construction), therefore the selection and thickness of insulation are to be carefully considered. Excessive internal insulation on a porous wall can be detrimental if designed incorrectly, particularly in multi-storey solid wall buildings where joist ends may be built into the wall. Heat from the building assists in keeping the joists dry. This effect is then limited by internal insulation if it is not given special consideration as outlined below.

The unique intelligent characteristics of the Isover Optima internal insulation system using Vario® technology allows for summer drying of the wall which is facilitated by the vapour permeable characteristics of Isover glass mineral wool insulation and Gyproc plasterboard lining. This has been assessed on a range of wall types for application in Ireland. For more challenging scenarios such as those described below, breathable water proofing treatments to the wall exterior, i.e. hydrophobic coatings can help improve the dryness while maintaining the drying capability of the wall which thereby accommodates further internal insulation of the wall.

Under normal conditions of internal humidity, Optima is highly suitable and adaptable for internal insulation (R-value up to 4.5) of hollow block, solid blockwork and cavity walls. Furthermore, it may typically be used on rendered brick walls or unrendered stone walls in good order up to one-storey with limited thicknesses of insulation (R-value up to 1.5) and rendered stone walls above one-storey (R-value up to 3.0).

Unrendered solid brick walls require treatment to the exterior as indicated above. Internal insulation to zones of higher internal humidity will require use of Isover StopVap membrane in lieu of Vario® but also the application of a suitable external wall treatment.



## Please refer to the Code of Practice for Retrofit 2014

<http://www.ili.co.uk/en/S.R.54-2014.pdf>

This is the key document that is the backbone of NSAI, SEAI and Building Standards for Retrofit in Ireland.

## *Need regulatory advice?*



*Contact our technical team*

**ROI**  
1800 744480

**NI**  
0845 399 0159

**EMAIL**  
[tech.ie@saint-gobain.com](mailto:tech.ie@saint-gobain.com)



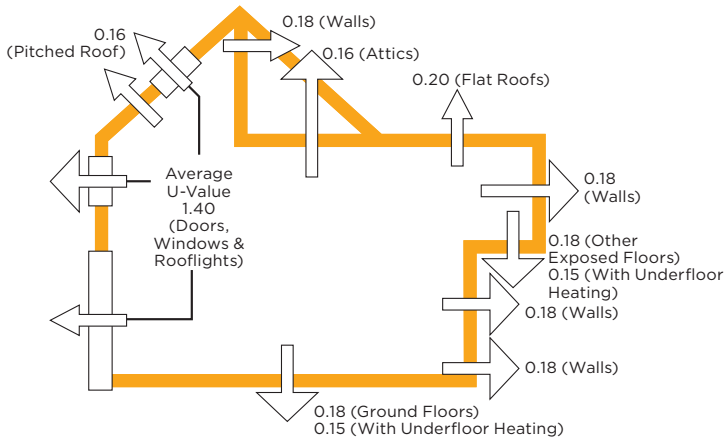
# NEW DWELLINGS

## Republic of Ireland

### Part L – Conservation of Fuel and Energy

Part L 2019 introduces the nearly Zero Energy Buildings (nZEB) which affects all new dwellings from 1st November 2019. In order to achieve this, the Maximum Permitted Energy Performance Co-Efficient (MPEPC) reduced from 0.40 to 0.30 and the Maximum Permitted Carbon Performance Co-Efficient (MPCPC) reduced from 0.46 to 0.35.

#### TGD Part L 2019



#### Sound Performance Levels – New Build

Separating Construction	Airborne Sound Insulation $D_{nT,wd}B$	Impact Sound Insulation $L'_{nT,wd}B$
Walls	53 (min)	-
Floors (including stairs with a separating function)	53 (min)	58 (max)

25% increase in overall energy efficiency (MPEPC = 0.30) Upper limit of air permeability is  $5m^3/(h.m^2)$

#### Note:

Unlike the regulations for Northern Ireland, there is no provision in the regulations for the adoption of 'Robust Details' to completely avoid on-site testing however the requirement for testing may be reduced.

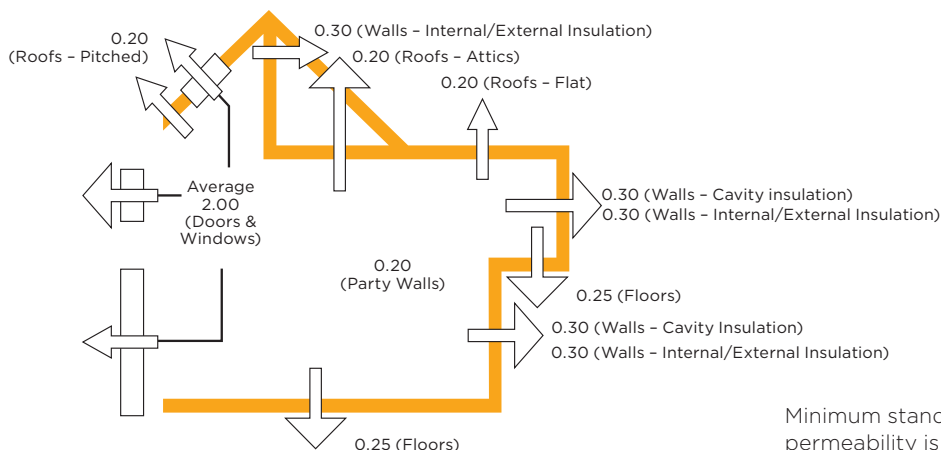
## Northern Ireland

### Technical Booklet F1 – Conservation of Fuel and Power in Dwellings

Although minimum standards have not changed since 2012, expectations in the market have moved as the cost effectiveness of higher performance has been proven and the UK has signalled a move towards nZEB/zero Carbon by 2020. Therefore, U-Values in line with ROI are highly recommended along with an integrated approach to airtightness and ventilation.

The rate of carbon dioxide emissions from a dwelling (DER) must not exceed the (TER) Target Emission Rate, 25% below the notional dwelling (2006 standards)

#### DFP Technical Booklet F1:2012



Minimum standards for U-Values Upper limit for air permeability is  $10m^3/(h.m^2)$

#### Note:

The party wall has a default U-Value of  $0.50 W/m^2K$  which may be reduced to 0.20 where effective edge sealing is provided around all exposed edges and in line with insulation layers in abutting elements. This may be further reduced to zero where the cavity is also fully filled.

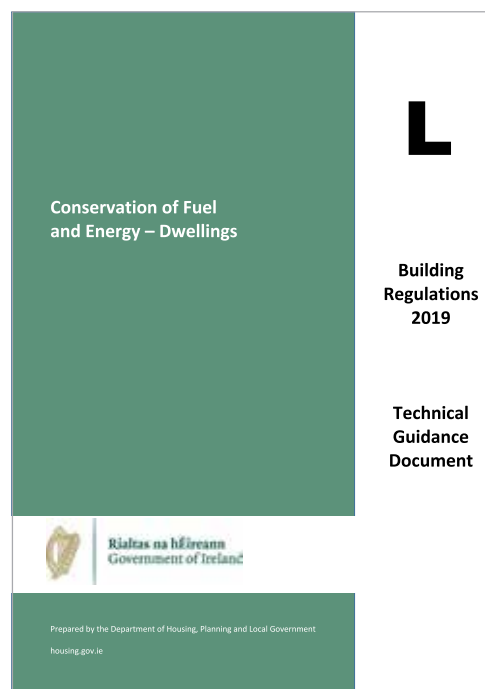


# AIRTIGHTNESS REGULATIONS

## Republic of Ireland

The airtightness of a dwelling, or its air permeability, is expressed in terms of air leakage in cubic metres per hour per square metre of the dwelling envelope area when the building is subjected to a differential pressure of 50 Pascals ( $\text{m}^3/(\text{h} \cdot \text{m}^2)@50\text{Pa}$ ).

The Building Regulations 2019 TGD L Dwellings indicates that reasonable provision for airtightness is to achieve a pressure test result of no worse than  $5\text{m}^3/(\text{h} \cdot \text{m}^2)@50\text{Pa}$ . Current good practice for energy efficient dwellings includes achieving airtightness of better than  $3\text{m}^3/(\text{h} \cdot \text{m}^2)@50\text{Pa}$  and best practice is less than  $0.6\text{m}^3/(\text{h} \cdot \text{m}^2)@50\text{Pa}$ . The airtightness appropriate for a particular dwelling design will depend upon the Building Energy Rating the builder is aiming to achieve. Care should be taken to ensure compliance with the ventilation requirements and permanent air supply of Part F and of Part J of the Building Regulations respectively.



## Northern Ireland

The DFPNI Technical Booklet F1 for new dwellings will require, type-testing of all new dwellings to an airtightness standard of no greater than  $10\text{m}^3/(\text{h} \cdot \text{m}^2)$  at 50Pa. For some dwellings where the carbon emission rate is difficult to meet, the airtightness target may also need to be reduced to meet the overall carbon emission rate required by the Regulations.

The DFPNI Technical Booklet F2 for work in buildings other than dwellings requires all commercial and industrial buildings with a gross floor area greater than  $500\text{m}^2$  to be tested for air permeability to a minimum standard of  $10\text{m}^3/(\text{h} \cdot \text{m}^2)@50\text{Pa}$ .





# MOISTURE CONTROL PERFORMANCE

Ireland's high levels of humidity make it essential to ensure that no condensation risks can occur within the construction.

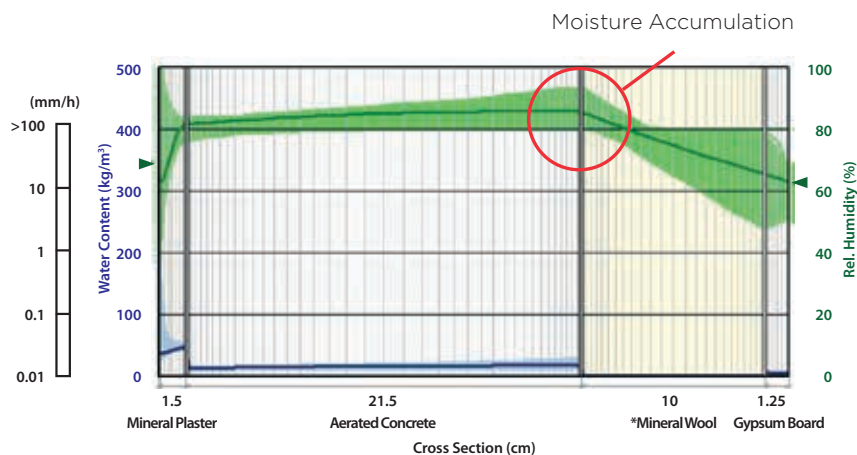
Simulating the Optima Dry Lining System on 215mm Aerated Concrete using WUFI\*, we can see that moisture accumulation is not an issue due to the performance of the Vario® vapour control membrane.

The example shown is a 3 year simulated model of a 215mm aerated concrete block that is insulated internally with worst case scenario conditions i.e. North orientated with a high internal moisture load.

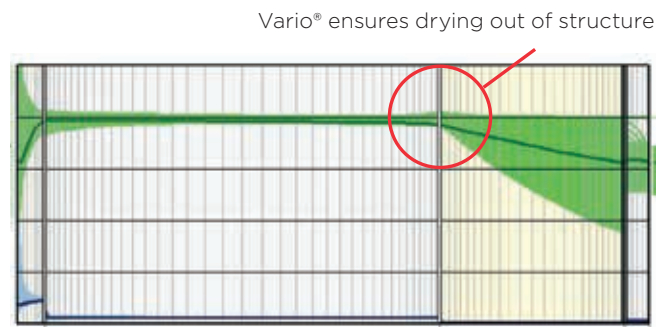
Without Vario®, a moisture accumulation on the internal face of the concrete wall can be seen in Fig 1, however when Vario® is introduced not only is the structure airtight but you are also protected from moisture Fig 2.

\*WUFI-ORNL/IBP is a menu-driven PC program which allows realistic calculation of the transient coupled one-dimensional heat and moisture transport in multi-layer building components exposed to natural weather.

**Fig 1: WUFI chart - without Vario® layer**



**Fig 2: WUFI chart - with Vario® layer**



**Note:**

We strongly recommend that Designers and Contractors attend Optima training with the Saint-Gobain Technical Academy prior to specification and installation due to the complexity of use of internal insulation on solid wall construction in particular.

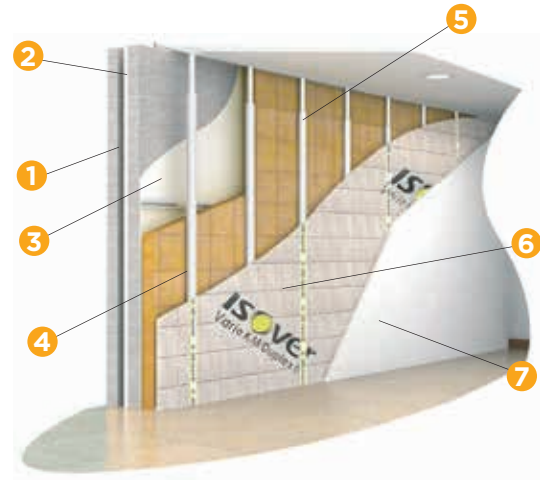


# WHERE CAN THE OPTIMA DRY LINING SYSTEM BE USED?

Ideally in rendered stone, block or cavity walls and single storey rendered brick walls.

## Cavity Wall Partial Fill

1. 15mm external render + 100mm block
2. 50mm cavity + 50mm foam (0.038)
3. 100mm block + Gyproc Skimcoat
4. Optima metal studs + fixing
5. Isover insulation
6. Vario® membrane + tapes
7. Gyproc Habito® Plasterboard



Insulation	U-value (W/m²K)	Total Thickness Of Dry Lining System (mm)
25mm Acoustic roll	0.35	57.5
50mm Metac	0.27	82.5
60mm Comfort 32	0.25	92.5
100mm Metac	0.20	132.5
<b>140mm Comfort 35*</b>	<b>0.16</b>	<b>172.5</b>
150mm Metac	0.15	182.5

## Hollow Block

1. 15mm external render
2. 215mm hollow block
3. 13mm Gyproc Skimcoat
4. Optima metal studs + fixings
5. Isover insulation
6. Vario® membrane + tapes placed on studs
7. Gyproc Habito® Plasterboard



Insulation	U-value (W/m²K)	Total Thickness Of Dry Lining System (mm)
25mm Acoustic roll	0.76	57.5
50mm Metac	0.47	82.5
60mm Comfort 32	0.40	92.5
100mm Metac	0.28	132.5
<b>140mm Comfort 32*</b>	<b>0.21</b>	<b>172.5</b>
150mm Metac	0.20	182.5



## Concrete Wall

1. 15mm external render
2. 200mm concrete
3. 13mm Gyproc Skimcoat
4. Optima metal studs + fixings
5. Isover insulation
6. Vario® membrane + tapes
7. Gyproc Habito® Plasterboard



Insulation	U-value (W/m²K)	Total Thickness Of Dry Lining System (mm)
25mm Acoustic roll	0.72	57.5
50mm Metac	0.46	82.5
60mm Comfort 32	0.39	92.5
100mm Metac	0.27	132.5
<b>140mm Comfort 35</b>	<b>0.21</b>	<b>172.5</b>
150mm Metac	0.19	182.5

## Brick Construction\*

1. External Render
2. 215mm brick
3. 13mm Gyproc Skimcoat
4. Optima metal studs + fixings
5. Isover insulation
6. Vario® membrane + tapes placed on studs
7. Gyproc Habito® Plasterboard



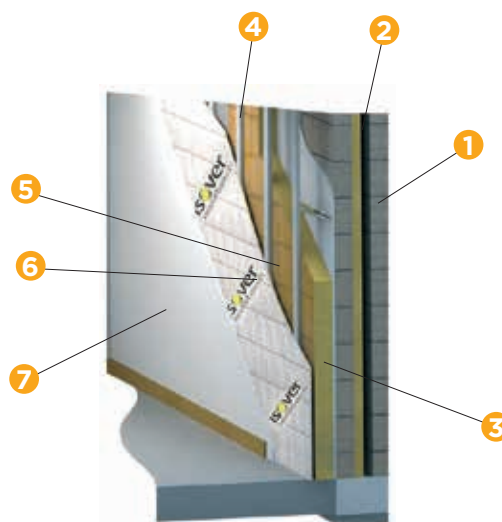
Insulation	U-value (W/m²K)	Total Thickness Of Dry Lining System (mm)
25mm Acoustic roll	0.72	57.5
50mm Metac	0.45	82.5
60mm Comfort 32	0.38	92.5

**For greater thicknesses of insulation, please contact our technical department**



## Partial / Full Fill + Optima

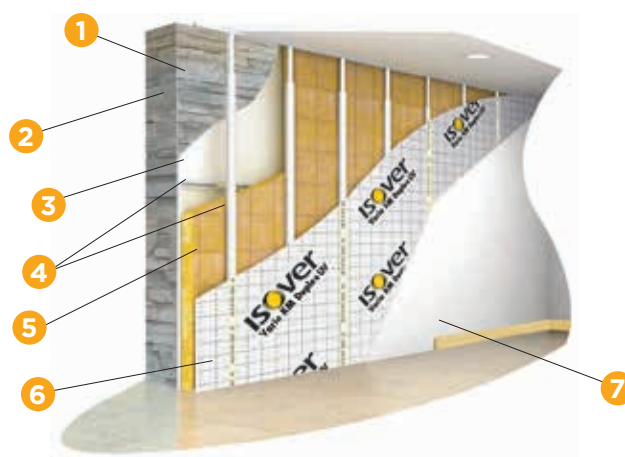
1. 15mm external render + 100mm block
2. Cavity + Isover Hi-Cav32
3. 100mm block + 13mm Gyproc Skimcoat
4. Optima metal studs + fixings
5. Isover insulation
6. Vario® membrane + tapes
7. Gyproc Habito® Plasterboard



Insulation	U-value (W/m²K)	Total Thickness Of Dry Lining System (mm)
25mm Acoustic roll	0.20	57.5
50mm Metac	0.17	82.5
60mm Comfort 32	0.16	92.5
100mm Metac	0.14	132.5
<b>140mm Comfort 35*</b>	<b>0.12</b>	<b>172.5</b>
150mm Metac	0.11	182.5

## Stone Wall

1. 18mm lime render
2. 600mm limestone wall
3. 18mm lime plaster
4. Optima metal studs + fixings
5. Isover insulation
6. Vario® membrane + tapes
7. Gyproc Habito® Plasterboard



Insulation	U-value (W/m²K)	Total Thickness Of Dry Lining System (mm)
25mm Acoustic Roll	0.59	57.5
50mm Metac	0.40	82.5
60mm Comfort 32	0.35	92.5

**For greater thicknesses of insulation, please contact our technical department**

### Note:

\*Please note that for unrendered wide single storey stone walls, the insulation should be limited to 50mm Metac. For insulation greater than 100mm or on unrendered multi-storey stone walls a hydrophobic coating should be used.



# ACOUSTIC PERFORMANCE

Indoor acoustic comfort should be provided by the building envelope to protect against noises from outside and adjoining properties.

When applied to existing wall constructions, the Optima Dry Lining System can significantly increase the sound insulation performance of a building, providing an increased level of personal privacy in the home.

The acoustic insulation of a construction in-situ is determined by the Apparent Weighted Sound Reduction Index:  $R_w$ . This index is expressed in decibels (dB), whereby the higher the  $R_w$  value the better the sound insulation performance. and the Maximum Permitted Carbon Performance Co-Efficient (MPCPC) reduced from 0.46 to 0.35.

**The table below lists some examples of estimated  $R_w$  values for common construction types in Ireland and the expected improvement following the installation of the Optima Dry Lining System to one side.**

			In-situ Sound insulation Performance $R_w$ dB		
Base Construction	Thickness of Isover glass wool	Total Thickness Of Dry Lining System (mm)	Base Construction	Base Construction + Optima	Gain in Sound Insulation Performance, dB
215mm solid blocks with 12.5mm sand/cement render on both sides	50mm	57.5	54	63	9
	100mm			64	10
	160mm			65	11
200mm precast concrete	50mm	82.5	55	64	9
	100mm			65	10
	160mm			66	11
215mm concrete block	50mm	82.	53	65*	12
	100mm			66*	13
	160mm			67*	14
Two leaves of 100mm dense concrete blocks with 100mm cavity	50mm	82.5	58	67*	9
	100mm			68*	10
	160mm			68*	10

\*This level of sound insulation performance is based on a construction comprising the described base construction only. Any compound elements to the overall construction, e.g. windows, doors etc., will result in a significant reduction in the overall performance.



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

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# OPTIMA DRY LINING SYSTEM COMPONENTS – METAL FRAME & INSULATION

## Metal frame

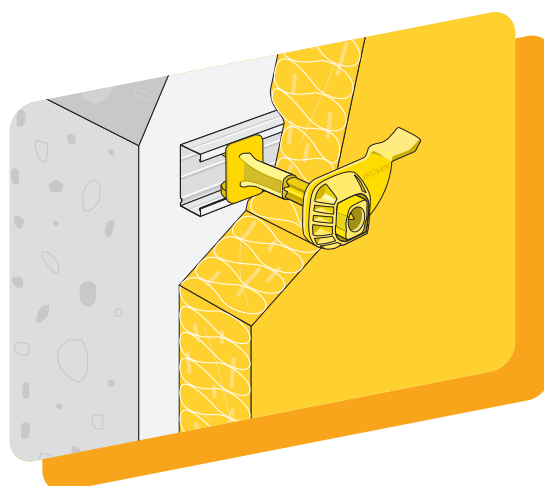
### Optima Metal frame – light, solid, flexible

The standard elements that make up the Optima frame ensure the system is both mechanically stable and economical. The structure can be adapted to fit many building types and manage any discrepancies in the existing wall surfaces.

For the facing support, the Optima C-channel (a 2.4m metal stud) together with Optima 300 and 500 extension pieces can be used to extend or adjust to the required height.

### Summary of benefits

- ✓ Avoids thermal bridges, as the insulation layer is continuous
- ✓ Precise, easy and practical installation and adjustment
- ✓ Plastic clip locking system ensures studs are firmly secured in position
- ✓ Time saving installation



Plastic Clip Locking System

## Insulation

### Isover insulation for Optima

Choose between various Isover insulation such as Metac Roll ( $\lambda = 0.034 \text{ W/mK}$ ), Comfort Roll 35

( $\lambda = 0.035 \text{ W/mK}$ ) or Comfort Panel 32 ( $\lambda = 0.032 \text{ W/mK}$ ) metal stud) together with Optima 300 and 500 extension pieces can be used to extend or adjust to the required height.

### Summary of benefits

- ✓ Products with low thermal conductivity save space and increase thermal insulation performance
- ✓ Soft tissue faced for easy handling, with gridlines to aid installation
- ✓ Compressed products save space and time, both for transport and distribution on site
- ✓ “A1” Fire rating and CE mark certified



Height adjustable metal studs



# OPTIMA DRY LINING SYSTEM COMPONENTS – VARIO®

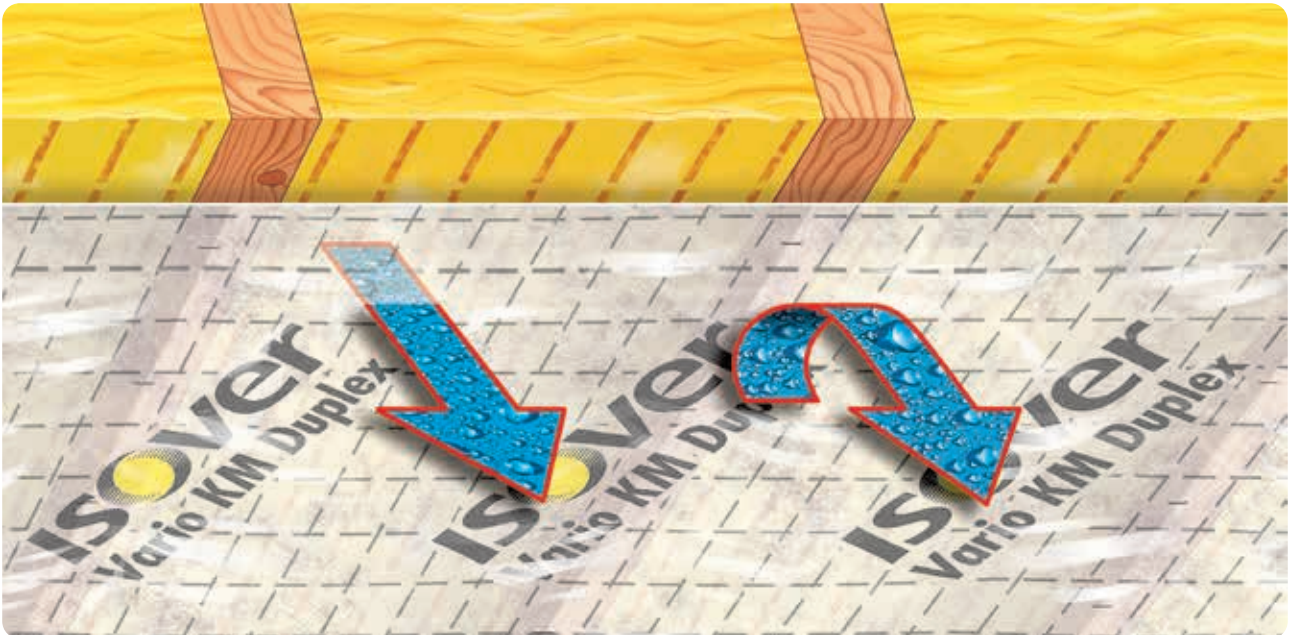
## Airtightness & Moisture control

**Vario® is Isover's solution to airtightness and protection against moisture.**

The Isover Vario® System is an intelligent airtightness and moisture control system. The Vario® membranes adapt and react naturally, changing its permeability according to humidity conditions, allowing closed building systems to increase their drying potential.

This means Vario® is truly multifunctional, acting as a barrier in winter and a breathable membrane in summer.

Vario® is compatible with the Optima Dry Lining System, meaning you can achieve high levels of airtightness, whether on a new or renovation project.



### IN SUMMER

As the structure warms in summer, the membrane's micropores open, allowing vapour to escape into the building interior.

### IN WINTER

In winter, the membrane prevents vapour from the warm interior diffusing into the timber structure.



# OPTIMA DRY LINING SYSTEM COMPONENTS – FACINGS

## Facings

Gyproc plasterboards are the modern way to provide high quality, high performance linings for today's buildings. Available in an unrivalled range of types and sizes.

Choose from:



**Gyproc Habito®** - Is a revolutionary plasterboard that provides enhanced acoustic performance, impact resistance and direct fixing capabilities. Optima has been tested for suitability with Habito® and offered superior fixing strength and low movement.



**Gyproc SoundBloc** - Has a higher density core than standard plasterboard and is designed for use in Gyproc wall and partition systems where greater levels of sound insulation are required.



**Gyproc Moisture Resistant** - Contains a water repellent additive in the core and paper liners and is best used as a base for ceramic tiling and in areas of intermittent high humidity.



**Gyproc WallBoard** - Is a general purpose plasterboard suitable for most applications where basic fire, structural and acoustic levels are required.

### Summary of benefits

- ✓ Quick assembly
- ✓ Smooth and level surface
- ✓ Wide choice of boards to suit specific performance requirements



**Compatible with Gyproc Habito® Plasterboard for added fixing capability, acoustic performance and impact resistance**



# ISOVER OPTIMA DRY LINING SYSTEM

For use in walls internally insulated



A high performance Dry Lining system, perfect for interior thermal and acoustic Dry Lining of walls, eliminates thermal bridges. Adjustable system for various wall types.



ACOUSTIC INSULATION



FIRE PROTECTION



MOISTURE CONTROL



BREATHABLE



MINIMAL WASTE



EASY TO TRANSPORT



ENERGY SAVINGS



EASY TO INSTALL




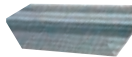
RECYCLED GLASS






PROTECTED PLANET



THERMAL INSULATION

Product	Lead Time	Order Code	Pallet	Units Per Pack	
Optima Floor and ceiling U-channel	A	5200425735	40	60	
Optima C-channel	A	5200425740	40	60	
Optima 500mm extension	A	5200425741			

Product	Lead Time	Order Code	Pallet	Units Per Pack	
Optima Connector	A	5200537462	252 Packs	23	
Optima Support 75mm	A	5200544332	126 packs	50	
Optima Support 100mm		5200544335	126 packs		
Optima Support 120mm		5200544337	126 packs		
Optima Support 140mm Vario®		5200544354	126 packs		
Optima Direct Support (70mm - 160mm)	A	5200544358	126 packs	40	

FIRST NSAI CERTIFIED  
DRYLINING SYSTEM  
IN IRELAND



NSAI



A Ex Stock

B Up to 7 working days

C 14 working days

D Available to order, Contact Customer Services



# CASE STUDY

## The Glebe, Johnstown Co Kilkenny, Ireland

### Project Overview

VParochial House Restoration in Kilkenny

### Overview

This parochial house required a building fabric that consisted of a 'breathable' wall lining system both internally and externally. The house dates back to 1828, and was built as a one off residential building. Prior to the renovation, the existing walls were extremely cold and needed to be upgraded thermally. Because the building was a listed building by the Local Authorities, it was exempt from BER certification. The walls could not be sealed due to the conservation policies. Therefore, a 'breathable' system was installed internally using the Optima Dry Lining System.

- ✓ The restoration had three crucial aspects:
- ✓ Thermal upgrade to external walls
- ✓ Fully 'breathable' walls
- ✓ Improving sound insulation

### Challenges

Because the house was a 3-storey building, the walls were 3.5 metres high. This was challenging for contractor Sean Moore and his team, as it meant that the chosen Optima Dry Lining System C-channels needed to be installed at 400mm centres, with an accompanying horizontal C-channel at every 1 metre height. Certain areas of the house had curved details that needed to be dry lined, which required a member of the team to design according to the curve.

The shutter windows in the building had deep reveals, which also needed to be lined. This was tricky but was solved by using a narrower acoustic insulation. Because the building structure needed to be maintained and restored close to its original state, the team had to ensure that they were limiting damage to the structure. To ensure that this would not occur, Sean and his team researched a lot of products and systems prior to undertaking the restoration and determined that Optima provided for the least impact and most adaptable solution, easily accommodating services. Value for money was also a key aspect of this research and Sean found that the Optima Dry Lining System was the most suited option for their budget; as it helped speed up installation and reduce the installation cost for the dry lining of the project.

### Results

Optima Dry Lining System gave the team the flexibility the restoration required, and allowed for easy removal and refit, which can sometimes be needed on renovation projects of historical buildings – unlike a sprayfoam system, where application cannot be redone.

Sean said himself that, "The Optima Dry Lining System is very user friendly to install. Along with the help of the Isover team, who came on site to carry out site demonstrations, we put the system together with ease. The system is extremely cost effective when compared to other breathable systems. All in all, the Optima Dry Lining System ticks all of the boxes for dry lining old stone walls."







**Isover Ireland**

Unit 4, Kilcarbery Business Park,  
Nangor Road, Dublin 22  
D22 R2Y7  
Telephone: 01 629 8400  
Email: [info@isover.ie](mailto:info@isover.ie)  
[www.isover.ie](http://www.isover.ie)



@SaintGobainGroup



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