Love your home... Love Liniar

Liniar

Liniar Loves...

Cream casement windows with French door

# Contents


| | |
|---|---|
| **Introduction** | **4** |
| Window supply chain | 6 |
| About Liniar | 8 |
| Window Energy Ratings | 9 |
| How Liniar profiles work | 10 |
| Standard vs. EnergyPlus | 11 |
| Security and accreditations | 12 |
| The Liniar range | 14 |
| **Windows** | **17** |
| Casement windows | 18 |
| Flush sash windows | 21 |
| Tilt & turn windows | 24 |
| French windows | 25 |
| Bi-fold windows | 26 |
| Bay or bow windows | 27 |
| **Doors** | **29** |
| Residential doors | 30 |
| Stable doors | 30 |
| Composite doors | 31 |
| French doors | 34 |
| **Patio doors** | **37** |
| Patio door configurations | 38 |
| ModLok™ patio doors | 38 |
| **Bi-fold doors** | **41** |
| Bi-fold door configurations | 42 |
| Standard bi-fold doors | 44 |
| ModLok™ bi-fold doors | 45 |
| Alumina bi-fold doors | 46 |
| **Conservatories** | **51** |
| Roof styles | 52 |
| The Liniar conservatory | 53 |
| Orangeries and lanterns | 55 |
| **Colours and more options** | **56** |
| **Fascias, soffits and trims** | **60** |
| **The Liniar outdoor range** | **62** |

# **Designed to keep** heat in your home

When you choose Liniar, not only are you assured of a high quality product, you'll be taking advantage of the most technically advanced range available in the UK.

PVCu windows may look similar – but it's the bits you don't see, tucked away inside the frames, that make a huge difference to how the windows perform, and how much energy they save – or waste – over their life cycle.

First introduced to the UK in the early 1980s, PVCu (or UPVC as they were known then) windows were unattractive and bulky – and only available in white. Being cheaper to produce than alternative materials, they were soon used extensively in new buildings all over the country.

Most other PVCu window systems have been updated since then – but Liniar is the only range to have been designed completely from scratch combining extensive industry experience with the most modern window technology.

Launched in 2008, Liniar frames are not only beautifully slim and available in a huge choice of styles, colours and finishes – they contain a huge number of hidden features to make them the most energy efficient frames you can choose.

## Safe and secure

Liniar windows are fitted with high security multi-point locking as standard and are independently tested to the requirements of PAS:24 and Secured by Design.

## Energy Efficient

With unique multi-chambered PVCu profile, Liniar windows can achieve the very latest A++ energy rating, helping retain heat within your property.

## Fully tested

Liniar products are put through exhaustive testing processes to ensure they are robust, durable and built to last.

## Eco-friendly

Each PVCu product in the Liniar range is made from lead-free, energy efficient, recyclable PVCu, making it a sustainable choice.

## Made in Britain

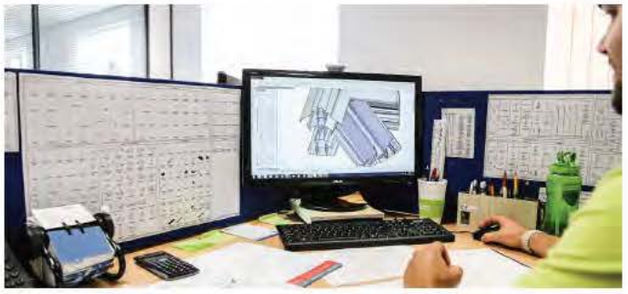
The Liniar range is designed, tooled, extruded and tested at an award-winning, purpose-built, state-of-the-art factory in Derbyshire.

## Low maintenance

Liniar products won't rot, rust, or require painting - just an occasional clean with warm soapy water, even with our foiled colours.

# Window supply chain

There are four main steps in the process of producing a PVCu window in the UK.



## 1. Design

Each product design is painstakingly crafted and created by the systems house (Liniar), using the latest software and 3D print technology, then tested before the manufacturing process can commence. Unique designs are patented to ensure the innovation is protected and only Liniar customers benefit from the investment and effort that goes into designing our products.

## 2. Extrusion

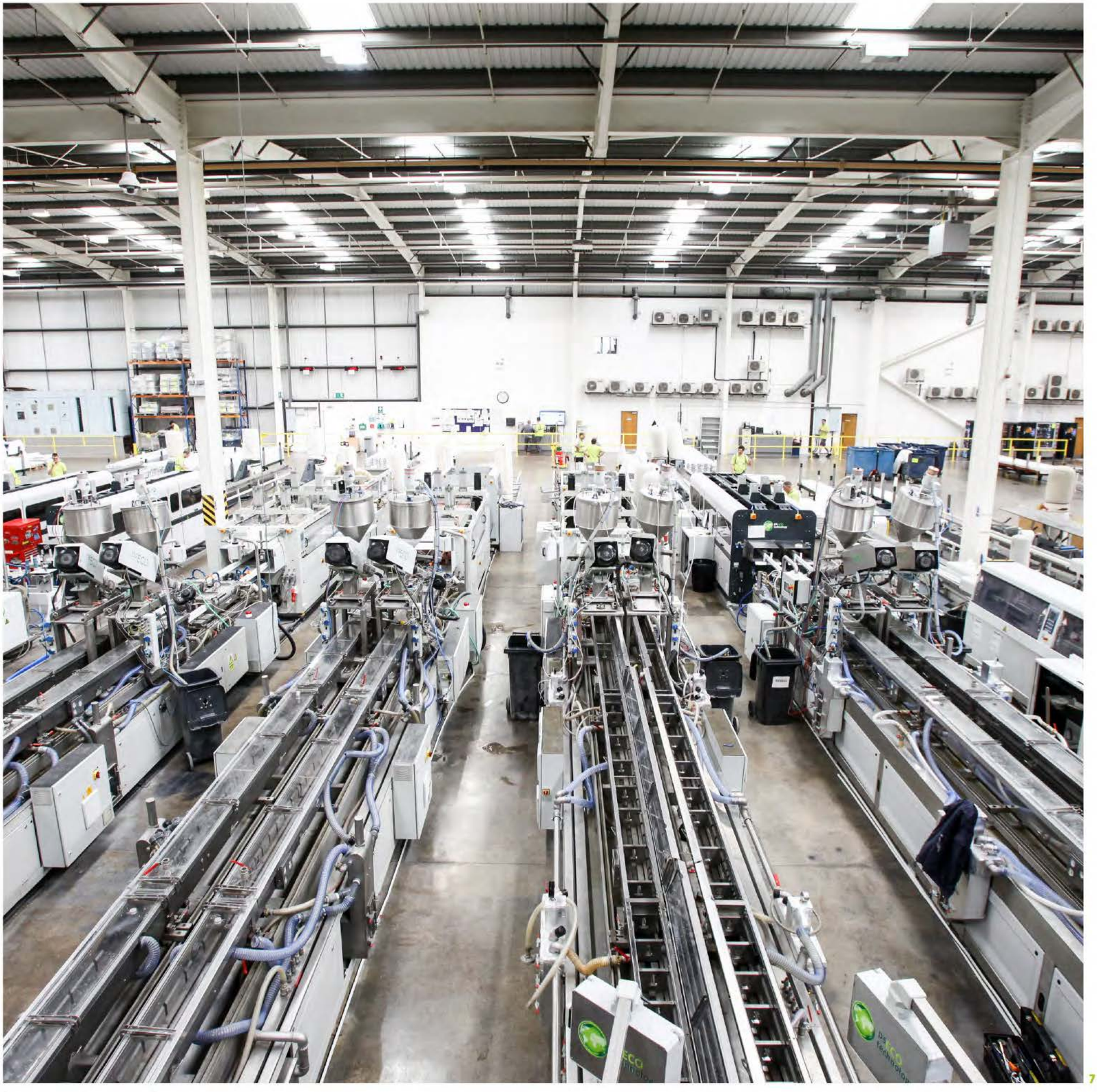
The systems house also manufactures the profile, or the PVCu parts of the window, through a process called extrusion. At Liniar's extrusion plant, which features the biggest PVCu mixing plant in Europe, raw materials are heated and squeezed through shaped dies, then cooled as they come out – forming perfect lengths of the correct profile for each piece of the window system.

## 3. Fabrication

The different lengths of PVCu profile, together with other components needed to make the finished product, are ordered by and shipped to a specialist window fabricator. The fabricator cuts and welds the window together using Liniar's strict design specifications. Glazing units are added, together with hardware such as hinges and handles, and accessories such as astragal bars, resulting in a finished window.

## 4. Installation

Some fabricators also offer an installation service; others sell windows and doors onto specialist installers to fit into your home. You should always ensure your window fitter has a card demonstrating his Minimum Technical Competency, or MTC – this is a requirement by FENSA to offer reassurance that your installer has been properly trained.



# About Liniar

## The most up-to-date system on the market.

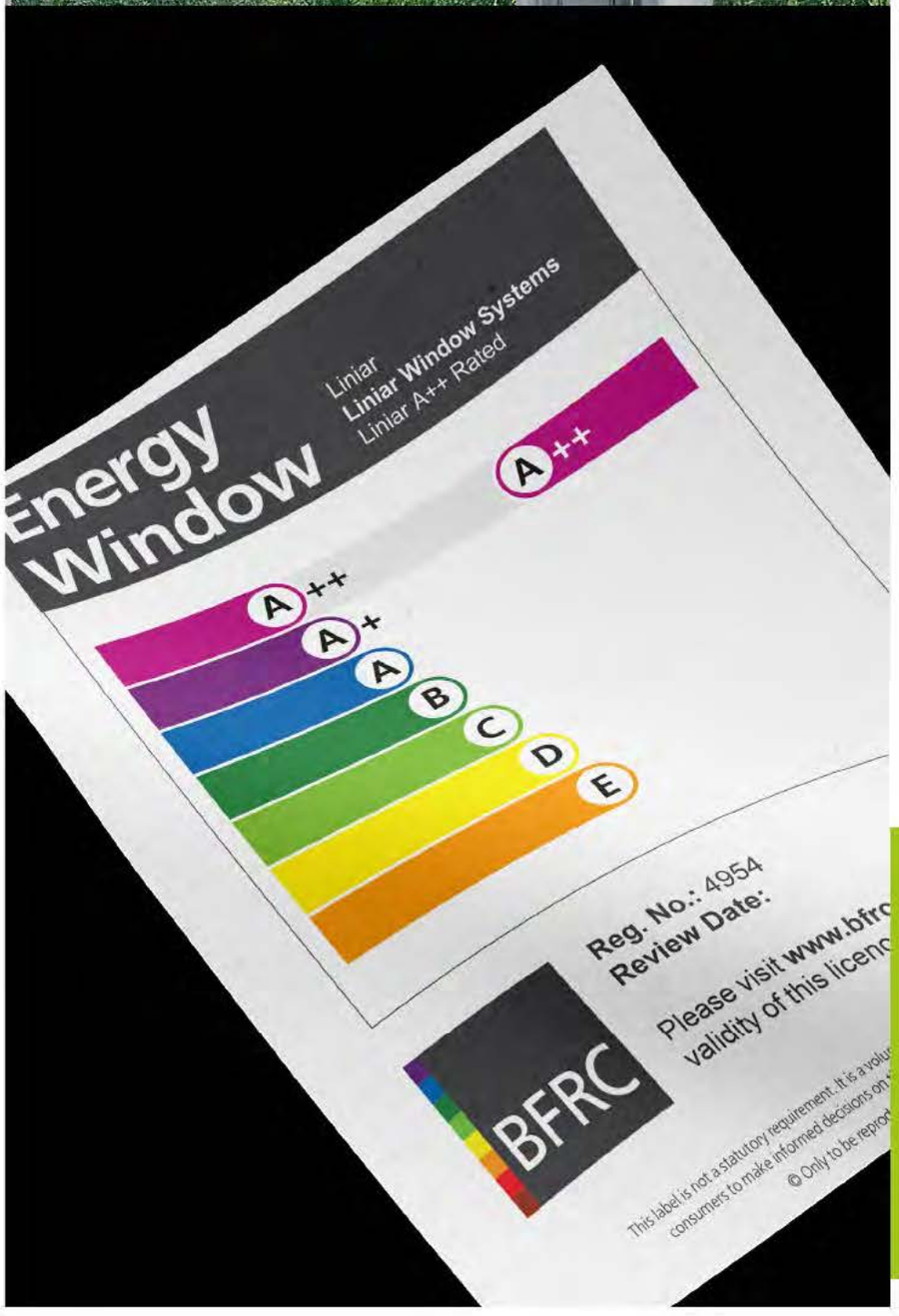
Liniar was created by bringing together some of the most knowledgeable and forward thinking designers and experts in the window industry – with more than 500 years of experience between them.

HL Plastics Ltd, the company behind the Liniar brand, is an award-winning Derbyshire firm.

Continued investment in infrastructure, technology, machinery and a great team of people has helped Liniar to become one of the market leading window systems with a customer base of specialist fabricators all over the UK, all creating beautiful products to supply to installers and homeowners.

The design team behind the Liniar brand is constantly pushing the boundaries of product innovation, with a focus on research and new products in development all the time. As a result, Liniar has developed a well-earned reputation within the window industry for innovation.

By being agile and responsive to customer feedback, Liniar has developed an impressive portfolio of products. The range spans not only windows, doors and roofs, but lots of clever design ideas, such as bi-folding doors to give your home that real 'wow' factor. Liniar's matching range of silicones, trims, fascias and soffits also ensures a perfect finish with fully matching colours.




# Window Energy Ratings

## Up to 20% of your home's heat can be lost through your windows.

That's why it's important to make sure your new windows are as energy efficient as possible

The Window Energy Ratings scale is designed by the British Fenestration Ratings Council (BFRC) to measure the thermal performance of windows, and enables different windows to be compared on a scale that runs from A++ down to E.

You may be familiar with the rainbow label, as similar labels should be on the back of your fridge, freezer and other white goods.

Your windows should be supplied with a similar label to confirm how efficient they are – and the higher the rating, the more heat they'll keep inside your property.

The BFRC rating indicates how well a product will:

- help you contain and conserve heat within your property when it's cold outside
- keep out the elements
- resist condensation on the inside of the window
- contribute to improved sound insulation.

### Liniar helps generate energy for eco-house project

A house featured on the BBC programme 'The House that £100k Built' was designed with Liniar EnergyPlus windows, due to their incredible thermal efficiency. U-values of 0.8W/m²K were achieved, with the house actually generating more electricity than its owners consume.

You can read the full story on the Liniar website at www.liniar.co.uk/case-studies.

# How Liniar PVCu profiles work

PVCu is a natural insulator, so it's one of the most energy efficient materials for a window frame. Inside a Liniar frame, multiple chambers act as barriers, making it difficult for the heat inside your home to be transferred through and escape outside.

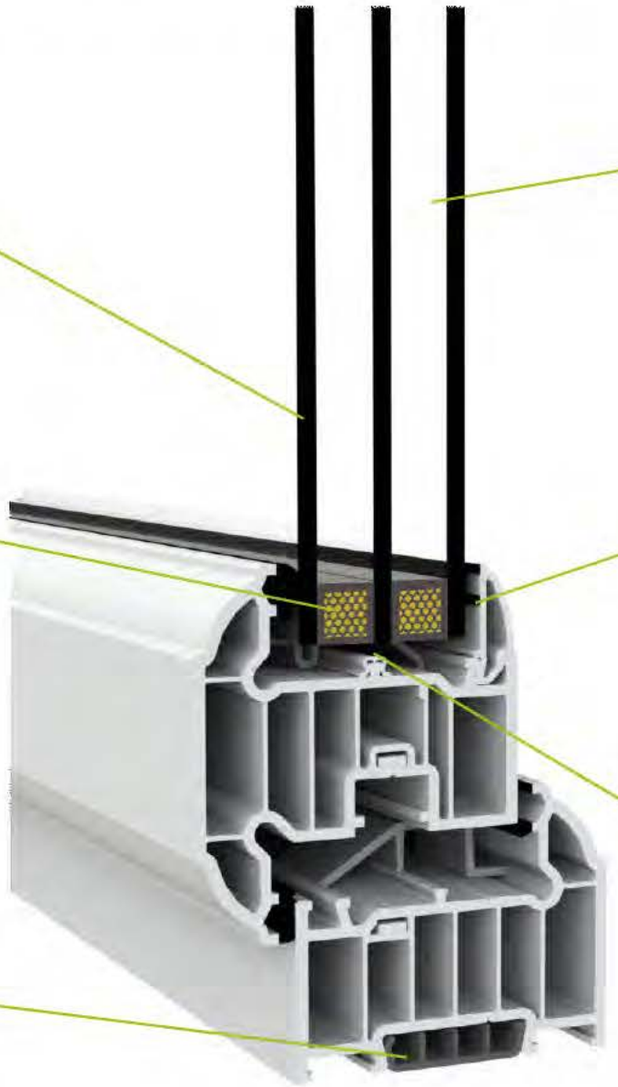
The drawings opposite show the inside of a Liniar standard and EnergyPlus frame, the colours representing heat and cold – with red symbolising the heat from your home and purple the cold air coming from the outside.

### Patented designs

Liniar has patented a number of additional features that make its frames more energy efficient.

### Glazing

Liniar profiles are able to accept either double or triple glazing, depending on your requirements.



### Spacer bars

Warm edge spacer bars can be selected, separating each glazed panel for higher energy efficiency.

### Bubble gasket

Liniar's patented 'bubble' gasket is co-extruded alongside the frame itself – so no heat loss or leaks.

### Thermal dam

The patented thermal dam creates a multi-chamber thermal barrier at the frame's outer edge.

### Glazing flipper

Liniar's unique glazing flipper creates a thermal barrier to seal the perimeter keeping the cold out.

The result is a supremely energy efficient glazed product, capable of achieving the highest possible Windows Energy Rating of A++ or a U-value of 0.8 W/m²K with triple glazing. Ask your Liniar fabricator or installer for more information, or use the Liniar WER Calculator at **www.liniar.co.uk/WER-calculator** to find out all the different options available.

Standard

EnergyPlus

# Standard vs. EnergyPlus

## Why pay to heat your home and lose up to 20% of the heat through your windows and doors?

EnergyPlus

Liniar PVCu window and door profiles are available in two formats – both extremely energy efficient.

- Standard – 4 symmetrical chambers, achieving U-values as low as 1.2 W/m²K
- EnergyPlus – 6 symmetrical chambers, achieving U-values as low as 0.8 W/m²K

Both standard and EnergyPlus profiles are completely interchangeable and look exactly the same from the exterior – the only difference you'll see as your windows are fitted is the protective tape, which will feature the EnergyPlus logo if you've ordered 6-chamber windows.

Liniar standard 4-chamber profile offers a cost effective option with energy efficiency that still beats most similar types of PVCu window.

However, if the highest possible thermal efficiency is one of your selection criteria, Liniar EnergyPlus profiles can achieve an A++ rating without the need for expensive low-iron glass on the outer pane of glass or the need for costly thermal inserts, making it a cost effective choice overall.

Both standard and EnergyPlus profiles are available in either chamfered (bevelled) or sculptured (curved) styles, depending on the product. Please see individual product pages for more details.

# Security and accreditations

The Liniar system has been designed to maximise energy efficiency without compromising security. This is backed up by the ongoing security testing of Liniar products, together with third party accreditation where applicable.

## ModLok™

Developed by Liniar in conjunction with the world's leading lock manufacturers, the revolutionary patented ModLok™ *(patent pending: 1306594.1)* technology is built into Liniar's bi-folding and patio door systems. ModLok™ is a highly innovative combined reinforcing and locking mechanism, bringing additional strength and rigidity to the doors and enabling wider configurations of sliding and folding doors.

With hook bolts, shootbolts, anti-lift technology, anti-bump cylinders and optional anti-snap cylinders, ModLok™ products are extremely secure. Even hinge fixings are hidden inside the doors so they can't be unscrewed from the outside. Combining frame reinforcing within bi-fold and patio doors with a high security locking mechanism, Liniar's ModLok™ offers the structural benefits of an aluminium door.

See page 37-45 for more details.

## Alumina by Liniar

The Alumina bi-fold system is manufactured from aluminium and offers similar high security features to ModLok™. The addition of an innovative high density polymer *(patent pending: 1522501.4.1)* lock ensures no heat is lost through this vital component. Unlike other aluminium doors, the lock itself creates a thermal break to help the Alumina bi-fold achieve low U-values.

See page 46-49 for more details.

## Secured by Design

Liniar Secured by Design products are designed with exceptional security features and confirmed as meeting the requirements of the Association of Chief Police Officers.

## PAS 24:2012

The British Standard for enhanced security performance, PAS 24 testing also includes testing for air and water tightness and wind loading to BS 6375.

## BBA Approval

Liniar's whole window system is BBA (British Board of Agrément) Approved, verifying an impartial and unbiased review on the performance of products.

## BS EN 12608:2003

Holding the British Standard for quality, consistency and performance required for PVCu extruded hollow profiles, Liniar's systems are tested to ensure continued compliance.

## BuildCheck

An independent testing house conforming to British standards and accredited by UKAS and the BFRC. Liniar's ModLok™ bi-fold door was first to pass its Folding/Sliding Door Scheme.

## BS EN ISO 9001:2008

Liniar's factory has BS EN ISO 9001:2008 accreditation for quality management systems - proving its strong customer focus and continuous improvement cycle.

Before choosing windows and doors ensure they comply with the latest building regulations. See **www.liniar.co.uk/buildingregulations** for more information.

# The Liniar range

## Casement Window

The most popular choice, casement windows may include top or side opening sashes, arched tops, mock sash horns or astragal bars.

## Tilt & Turn Window

Perfect as a fire escape, the 'open in' style offers great options for cleaning from within as well as maximising ventilation.

## French Window

With both sashes opening out from the centre, Liniar French windows have a dummy centre mullion, resulting in a fully open aperture.

## Flush Sash Window

Offering both a sleek, contemporary appearance or the realism of a traditional timber window – with 21st century thermal benefits.

## Bi-fold Window

Popular in conservatories and orangeries, bi-fold windows fold back to one side of the opening for uninterrupted views.

## Bay/Bow Window

A great way to bring more light into your home, bay or bow windows can be made from standard or flush sash casements.

## Residential Door

Liniar's PVCu residential doors are available as opening in or opening out, designed to match perfectly with the window range.

## Composite Door

Offers up to six times the insulation of a timber door, combining the appearance of timber with superb thermal performance.

## Stable Door

A classic and charming alternative to a standard door, the two halves of the door can be opened independently – ideal for families.

## French Door

Liniar's stunning French doors come with the same high specification and colour choices as our window range.

## Patio Door

Featuring a unique 'air glide' system, Liniar's sliding patio door is ergonomically designed with four patents.

## Standard Bi-Fold

The first fully bespoke PVCu bi-fold doors to be engineered, designed and manufactured in the UK – and still the best.

## ModLok Bi-Fold

Featuring patented ModLok™ locks for high security and strength with supreme thermal efficiency, can span to 7 panes wide.

## Alumina Bi-fold

The latest product development from Liniar, combining a 'true' aluminium door-set with a thermally efficient locking mechanism.

## Roofline

Liniar's soffits, fascias and trims offer a perfectly matching solution to any installation, in a wide range of colours and finishes.

## Outdoor Range

Liniar's ranges of PVCu fencing, decking and piling products offer a high quality, low-maintenance option for landscaping.

## The Liniar window range

### Don't compromise between security and energy efficiency – choose Liniar.

The Liniar 70mm window system was created from scratch, building in innovative design features intended to reshape the accepted standards for PVCu windows. Multi-chambered frame technology means Liniar windows can achieve the highest energy ratings of A++ whilst at the same time attaining Secured by Design status. Standard 4-chamber and EnergyPlus 6-chamber frames both deliver supreme thermal efficiency.

All Liniar window styles are available in a choice of sculptured (curved) or chamfered (bevelled) frames and can be manufactured with either 28mm double or 36mm triple glazing. A huge range of colours and finishes means you can personalise your windows to your own requirements.

Why choose Liniar windows?

- Designed from scratch to achieve the pinnacle of thermal performance.
- Engineered with built-in security features and fully tested.
- Backed with quality assurance and accreditation for peace of mind.
- 100% lead-free, fully recyclable and fully guaranteed.

For more information visit www.liniar.co.uk/windows

# Casement windows

Still the most popular choice for homes all over the UK, Liniar casement windows offer total versatility and either classic or contemporary style.

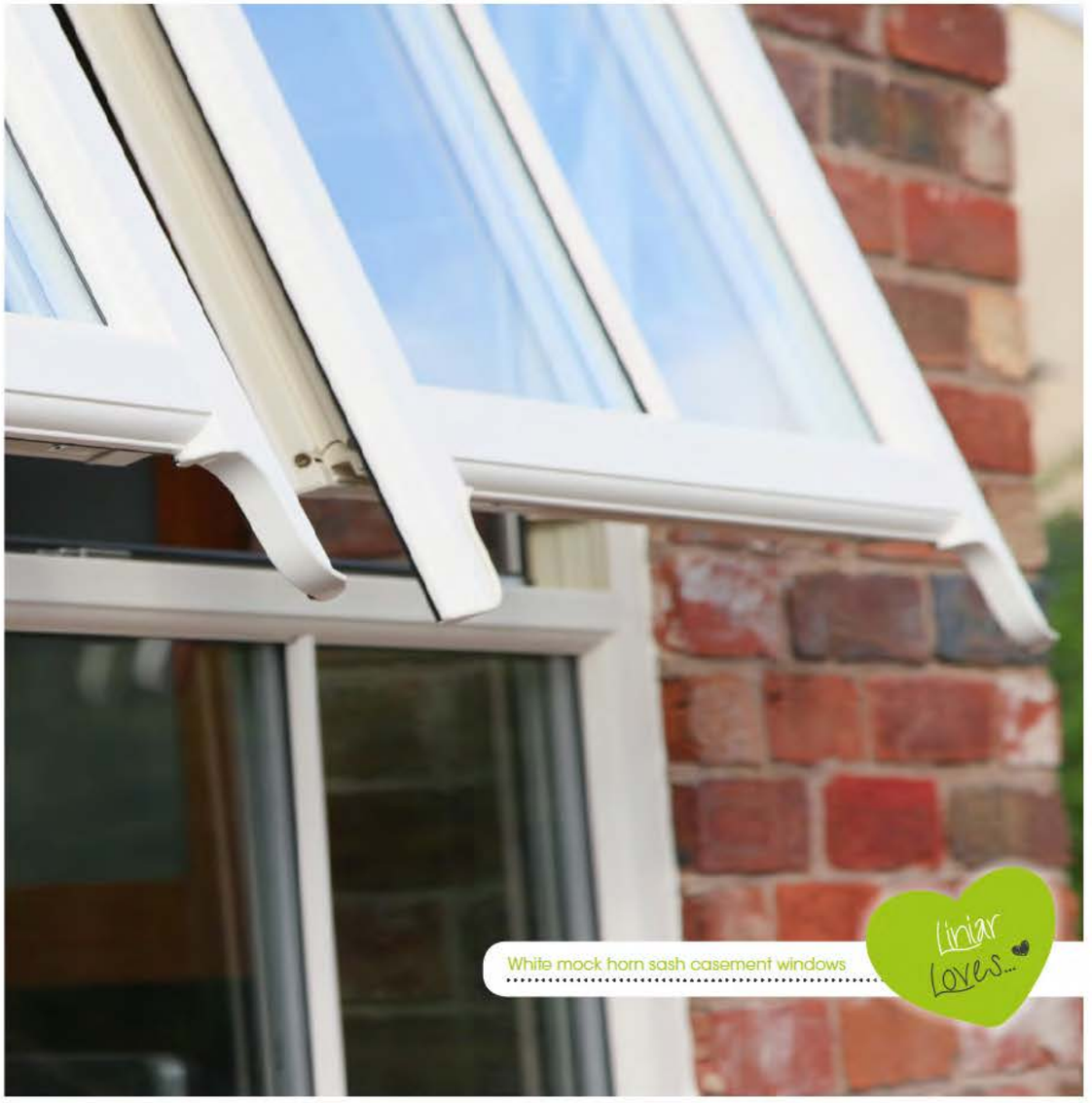
This traditional British window style offers slim sight lines to let in maximum light. It's available in a wide choice of configurations, including top or side hung windows, so you can personalise each window to your requirements. Adding moulded sash horns gives Liniar casement windows the appearance of traditional vertical sliders – or for additional character you can add astragal or Georgian bars to your windows.

You could also add arched tops, coloured or bevelled glass, and there's a wide range of colours and finishes to choose from. With matching cills and either traditional or contemporary handles, the choices are almost endless. Liniar's patented bubble gasket is used in all products and delivers a continuous seal – even in the corners – resulting in draught-free, weather proof and leak-free windows with U-values as low as 0.8 W/m²K.

Your installer will be able to advise you on the options available, or visit the Liniar website at http://www.liniar.co.uk/windows/casement to see the stocked colours and find out more about Liniar casement windows.

Options at a glance:

- Choose from standard 4-chamber or EnergyPlus 6-chamber frame
- Sculptured (curved) or chamfered (bevelled)
- Add Georgian bars and/or patterned glass
- Wide choice of coloured and foiled frames
- Wide choice of handle and hinge options.



White mock horn sash casement windows

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# Flush sash windows

## Sleek, flush and thermally efficient – Liniar's exciting flush sash range delivers a window with the realism of a traditional timber window.

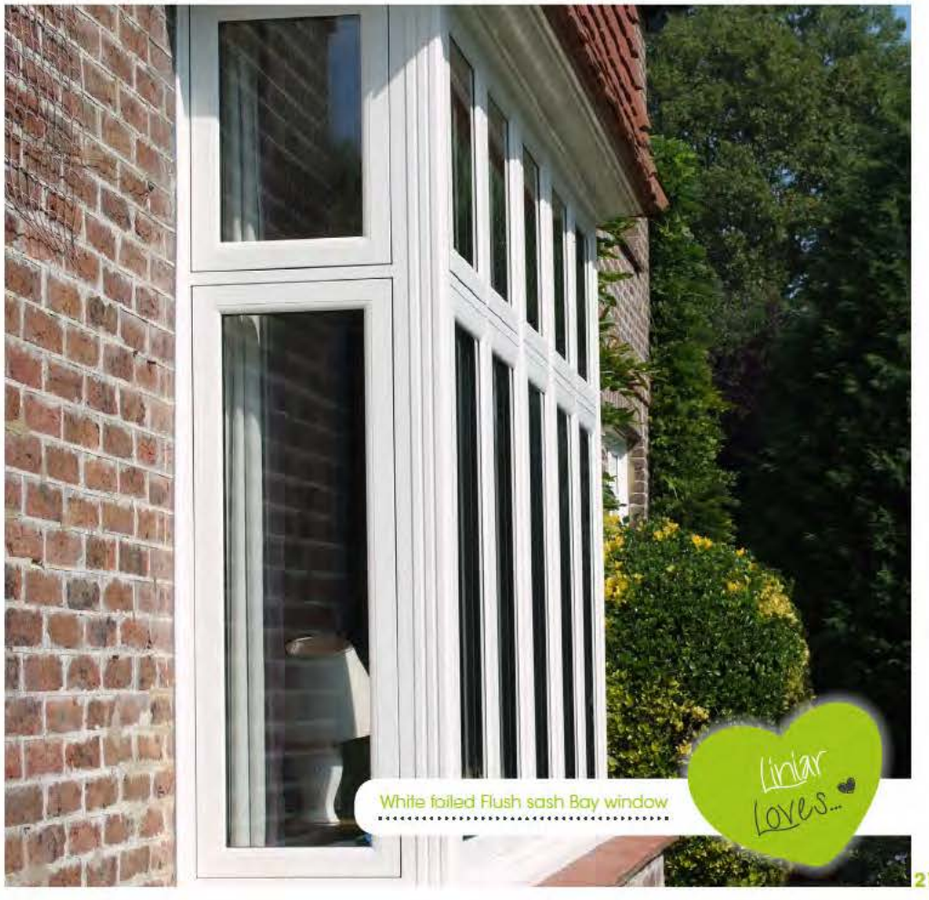
For many property owners, PVCu windows aren't an option due to planning or environmental restrictions. The Liniar flush sash range changes the rules, delivering realistic traditional-looking windows combined with 21st Century thermal benefits. As the name suggests, the sash fits flush into the frame on all external faces of the window, giving it a distinctive, sleek appearance that's also ideal for more contemporary properties.

With the inside of the sash beautifully sculptured, woodgrain effect foils can be factory fitted for an authentic timber façade, or you can choose flat foils for a modern effect. You could even try different colours on the sash and outer frame for a totally personalised look. The flush sash delivers A+ energy ratings and U-values as low as 1.2 W/m²K. Many delighted property owners have won over planning restrictions where PVCu had formerly seemed impossible, thanks to the Liniar flush sash.

Your installer will be able to advise you on the choices available, or you can visit the Liniar website at http://www.liniar.co.uk/windows/flush-sash to see the stocked colour options and to find out more.

Options at a glance:

- EnergyPlus 6-chamber outer frame & 4-chamber sash
- Sculptured (curved) edges
- Add Geogian bars and/or patterned glass
- Wide choice of coloured and foiled frames
- Wide choice of handle and hinge options.




White foiled Flush sash Bay window

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Cream foil casement windows and lantern roof

White Tilt & turn window with Georgian bars

# Tilt & turn windows

If you love opening your windows wide to let in fresh air, but worry about security, why not consider the European style of a Liniar tilt and turn window?

The 'open in' style gives great options for cleaning from within (in the turn position) and secure ventilation (in the tilt position).

Offering a greater scope for larger openings than a traditional casement window, Liniar's tilt & turn windows are ideal for high-rise as well as low-rise applications, and thermal performance is helped by the larger panes of glass. Astragal or Georgian bars can be added, and your installer will be able to show you the wide choice of coloured and patterned glass on offer to you.

As with casement windows, Liniar's patented bubble gasket delivers a continuous seal around the edges, resulting in draught-free, weather proof and leak-free windows with U-values as low as 0.9 W/m²K.

Your installer will be able to advise you on the choices available, or visit the Liniar website at http://www.liniar.co.uk/windows/tilt-and-turn to see the stocked colour options and find out more about this style of window.

Options at a glance:

- Choose from standard 4-chamber or EnergyPlus 6-chamber frame.
- Sculptured (curved) or chamfered (bevelled)
- Add Georgian bars and/or patterned glass
- Wide choice of coloured and foiled frames
- Wide choice of handle and hinge options.

# French windows

Similar to the styling of French doors, Liniar's French windows open out from the centre to offer a full-width opening and maximum light.

Offering a distinctive style, French windows are ideal as a fire escape. One sash carries with it the central mullion as the windows are fully opened, providing you with unrestricted access and views.

With high security locks, your security is assured – and child restrictors can also be added for peace of mind. Traditional or contemporary, French windows can be installed in a variety of locations and buildings.

Liniar French windows feature the patented bubble gasket used in all products, delivering a continuous seal, even in the corners. This results in draught-free, weather proof and leak-free windows. High energy ratings result in U-values as low as 0.8 W/m²K.

Your installer will be able to advise you on the choices available, or you can visit the Liniar website at http://www.liniar.co.uk/windows/french to see the stocked colour options and find out more about Liniar French windows.

Options at a glance:

- Choose from standard 4-chamber or EnergyPlus 6-chamber frame
- Sculptured (curved) or chamfered (bevelled)
- Add Georgian bars and/or patterned glass
- Wide choice of coloured and foiled frames
- Wide choice of handle and hinge options.

# Bi-fold windows

An increasingly popular choice, Liniar bi-fold windows fold back in a concertina-style to offer a full-width opening and maximum air and light.

Liniar bi-fold windows are popular for use in conservatories and orangeries and are also ideal for the commercial sector.

During the summer months they can transform a café or restaurant giving any establishment an outdoor, open feel, while also being secure and child-friendly.

If a bi-folding door isn't an option for your home, a bi-fold window can offer similar benefits whilst allowing you to retain valuable wall space inside your property.

Made to measure, a Liniar bi-fold window can be manufactured up to 7 panes wide and 1800mm high.

Your installer will be able to advise you on the choices available, or you can visit the Liniar website at http://www.liniar.co.uk/windows/bi-fold to see the stocked colour options and find out more about Liniar bi-fold windows.

Options at a glance:

- Standard 4-chamber frames
- Sculptured (curved) styling
- 28mm double glazed units
- Add Georgian bars and/or patterned glass
- Wide choice of coloured and foiled frames
- Wide choice of handles and hinge options.

# Bay or bow windows

Liniar's innovative bow and bay window styles offer a number of features and benefits unrivalled in today's marketplace and are available in a range of options.

A great way to bring more light into your home, a bow or bay window style utilises either a standard casement or flush sash window to form a collection of windows set together at an angle.

By choosing different styles, colours, glazing designs and handles, your bay or bow windows can be truly personalised for your home.

Liniar's innovative design of the interior and exterior joint couplings prevents dust traps forming, making cleaning with a damp cloth quick and easy.

Your installer will be able to advise you on the choices available, or you can visit the Liniar website at http://www.liniar.co.uk/windows/bow-and-bay to see the stocked colour options and find out more about Liniar bow and bay windows.

Options at a glance:

- Standard 4-chamber or EnergyPlus 6-chamber frames
- Sculptured (curved) or chamfered (bevelled)
- 28mm double glazed or 36mm triple glazed units
- Flush Sash styling available (see page 20)
- Add Georgian bars and or/patterned glass
- Wide choice of coloured and foiled frames
- Wide choice of handles and hinge options

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Black composite door with matching sidelights

# The Liniar range of doors

## Choose a Liniar door to create a stunning entrance to your home.

The profile, or frame, in a Liniar door contains multiple chambers to minimise the transfer of heat from the inside of your property to the outside. This, together with other innovative design enhancements, helps to minimise your energy costs on an ongoing basis.

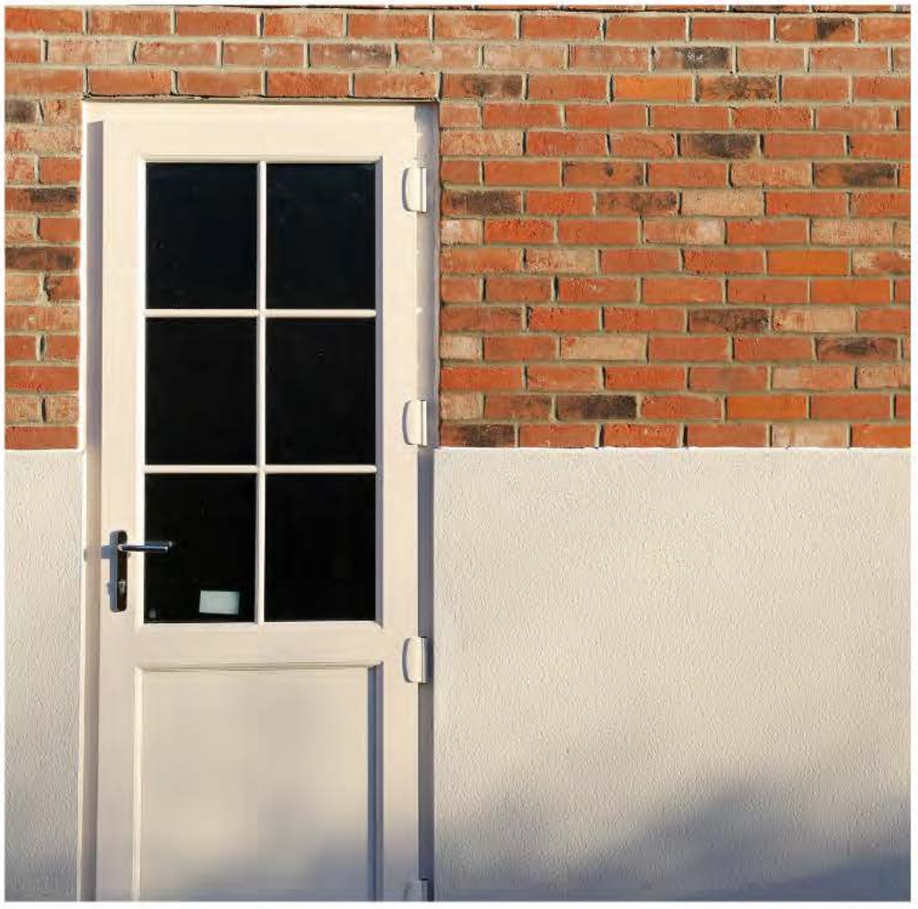
Both PVCu residential doors and composite front doors utilise Liniar frames to perfectly match with your windows, and offer superb energy ratings. Liniar fabricators are able to offer a vast choice of styles, designs and colours.

French doors offer a solution for wider entrances and let in more light - with U-values as low as 1.0.

Why choose Liniar doors?

- Supreme thermal performance compared to other doors on the market
- Fully tested and accredited with the highest security credentials
- Doors match perfectly with the Liniar window range for a beautiful finish
- Patented design features deliver the smoothest and lightest operation.

For more information visit www.liniar.co.uk/doors.



Chartwell Green Residential door with matching sidelight

# Residential doors

Your front door offers a first impression to callers to your home. With a Liniar PVCu residential door you can make sure it's a good one.

Liniar fabricators offer a wide selection of PVCu residential doors, all with the same energy efficient profile as your Liniar windows, together with high security locks and a great weather seal.

Every residential door is completely bespoke and made to order for you. Choose from a wide variety of colours and styles, glazed panels and matching sidelights. All Liniar residential doors are available with optional Part M compliant low threshold and your choice of hardware, handles, letter boxes and knockers. In addition, Liniar doors exceed British Standards and have achieved PAS 24:2012 and Secured by Design accreditation.

Liniar residential doors are also available in a 'stable' style, with the top section of the door opening independently of the lower section. Ideal for children and pets, the stable door style suits both traditional and modern properties.

Your installer will be able to advise you on the options available, or visit the Liniar website at http://www.liniar.co.uk/doors/residential to find out more.

Options at a glance:

- Choose from standard 4-chamber or EnergyPlus 6-chamber frame
- Sculptured (curved) or chamfered (bevelled)
- 28mm double glazed or 36mm triple glazed units
- Part M compliant low threshold available
- Wide choice of coloured and foiled styles
- Wide choice of handle, letterbox and hinge options.

# Composite doors

## Offering up to six times the insulation of a timber door, a Liniar composite door combines the look of timber with superb thermal performance.

Composite doors are made from a variety of materials including PVCu, wood, insulating foam and glass reinforced plastic (GRP). This combination of materials results in a very strong and secure door.

Each composite door has a high resistance to weathering and won't react to seasonal changes like a singular material door would. Liniar composite doors are designed with an attractive woodgrain appearance but, because of the materials used, they won't fade or discolour - and neither will they need painting, nor warp in damp conditions.

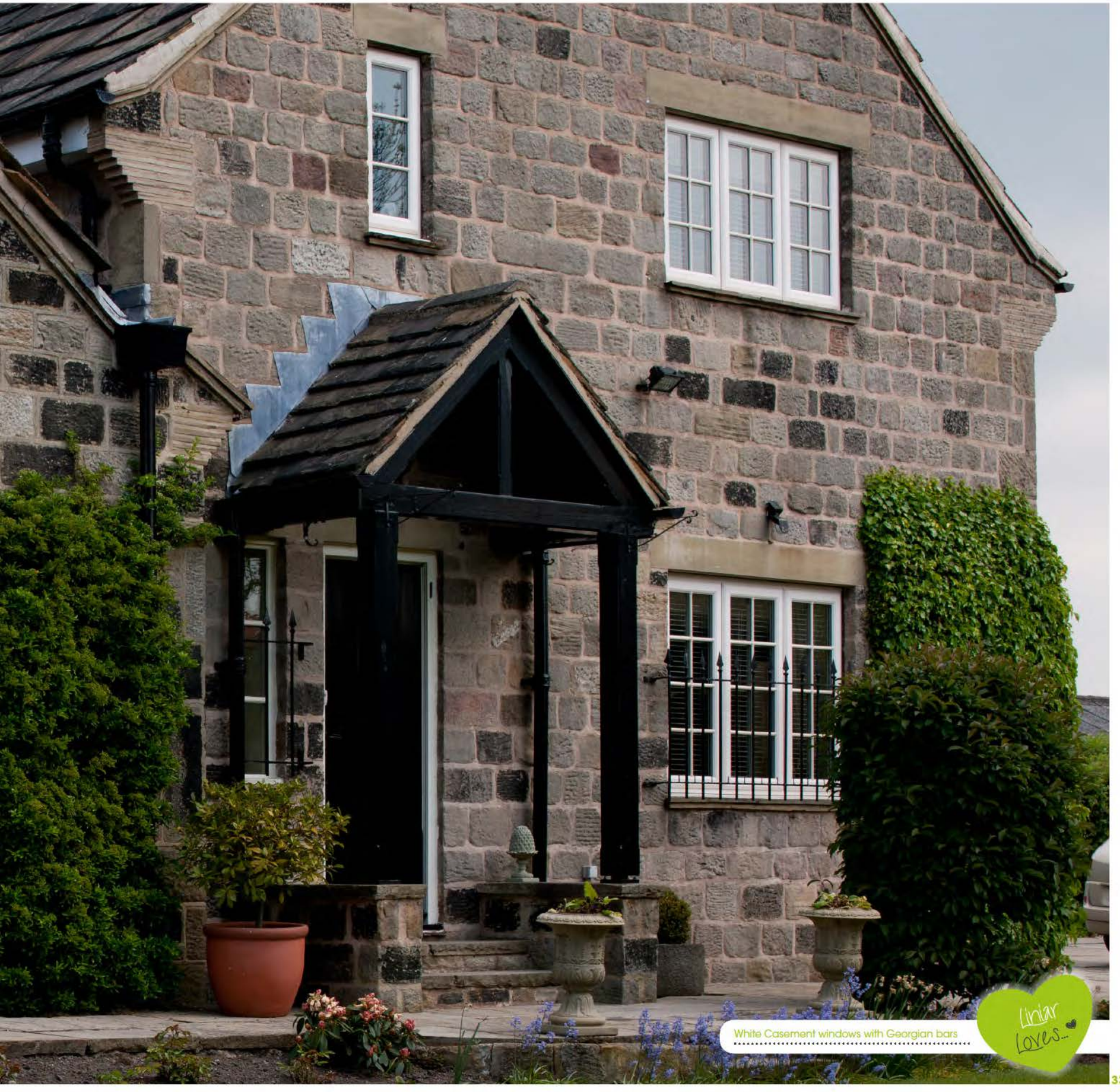
Doors can be manufactured with 44mm or 49mm deep door slabs, and the choice of colours, finishes, hardware and glazing options is almost endless. Each Liniar fabricator offers different ranges, styles and finishes, all with energy efficient Liniar frames.

Please ask to see individual brochures from your local installer for more details and options.

Visit the Liniar website at http://www.liniar.co.uk/doors/composite to find out more about composite doors.

Options at a glance:

- 44mm or 49mm (thickness) door slabs
- Sculptured (curved) or chamfered (bevelled)
- Part M compliant low threshold available
- Wide choice of coloured and foiled frames
- Wide choice of handles, letterbox and hinge options.



White Casement windows with Georgian bars

Linkar Loves...

# French doors

Slim sightlines and a 'floating' central mullion mean Liniar French doors are the ideal choice for a fully opening and secure entrance to your home.

An attractive alternative to sliding patio or bi-folding doors, French doors can open inwards or outwards to suit your living space. Choose from Liniar's sculptured style for beautiful curves, or chamfered for a flat, more modern finish to your doors.

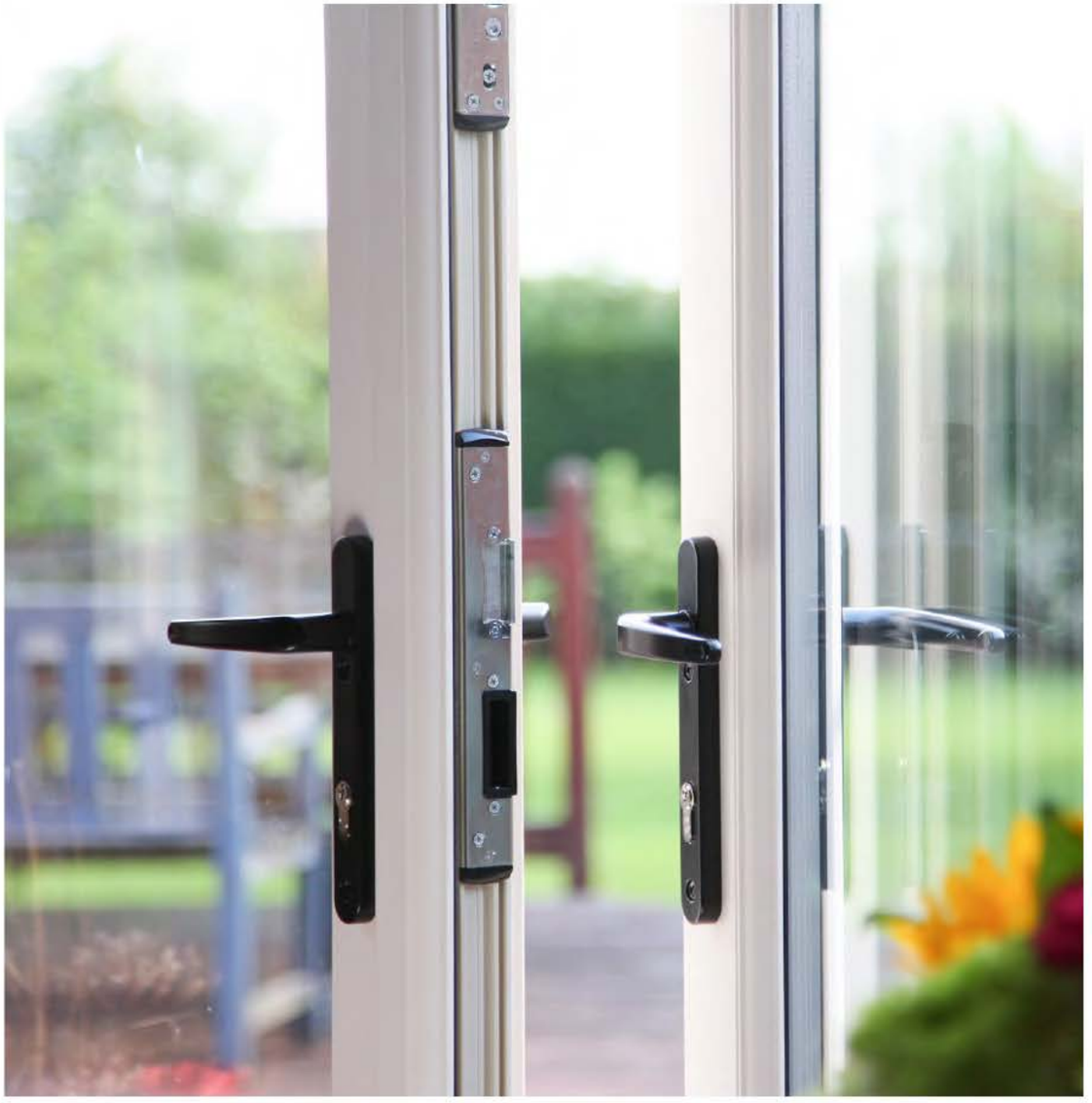
You could add sidelights for larger openings, and bevelled or patterned glass to add a distinctive style to your doors. Whichever design or colour you select, you can rest assured of the highest security as Liniar French doors carry PAS 24:2012 and Secured By Design accreditation.

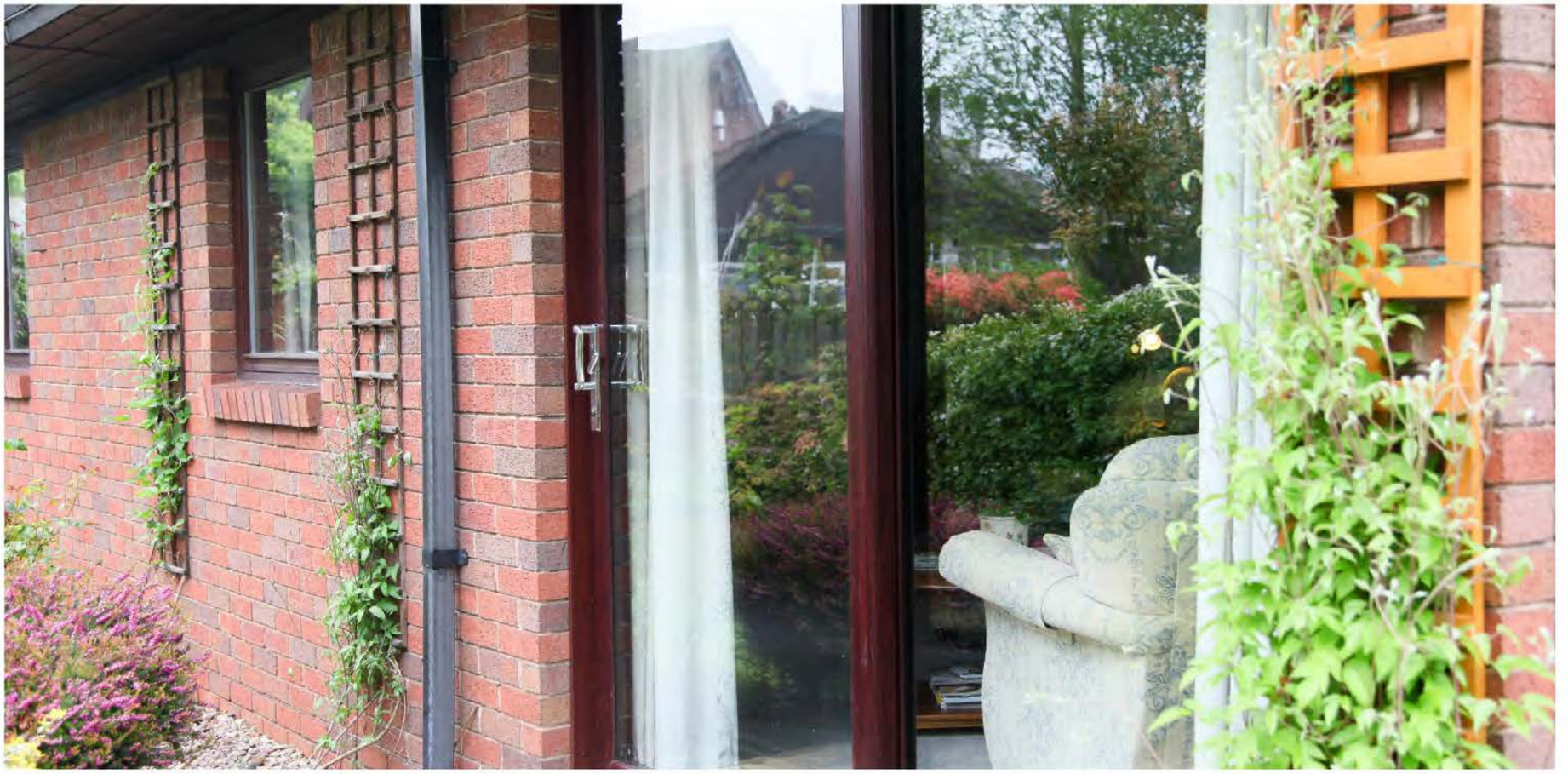
Outperforming most of the other leading brands, Liniar French doors can achieve a U-value as low as 1.0 W/m²K with triple glazing, ensuring the heat stays in your home.

Your installer will be able to advise you on the options available, or visit the Liniar website at http://www.liniar.co.uk/doors/french to find out more about French doors.

Options at a glance:

- Choose from standard 4-chamber or EnergyPlus 6-chamber frames
- Sculptured (curved) or chamfered (bevelled)
- 28mm double glazed or 36mm triple glazed units
- Part M compliant low threshold available
- Add Georgian bars and/or patterned glass
- Wide choice of coloured and foiled frames
- Wide choice of handle and hinge options.





# The Liniar ModLok™ patio door

## Stunning, ergonomic design with smooth 'air glide' system.

Traditional sliding patio doors are as popular as ever, letting in light and creating a smooth entrance to gardens and conservatories all over the UK.

The Liniar ModLok™ patio system takes a traditional concept and brings it firmly into the 21st century with styling, operational and patented security features making it a stand-out product in the range.

Reaching up to four panes wide, with up to two moving panes, choosing a Liniar patio door with ModLok™ technology will deliver style without compromising security. And with a family-friendly low threshold option, which can be installed without the need for expensive trench excavation, your new installation can usually be carried out in just one day.

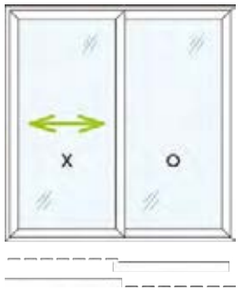
Why choose Liniar patio doors?

- Slim sightlines and hidden crash stops for beautiful ergonomics
- 'Smooth as air' gliding motion and built-in decelerator
- Cycle tested to 28,000 full opening cycles
- Optional Part M compliant low threshold with no need for trench excavation.

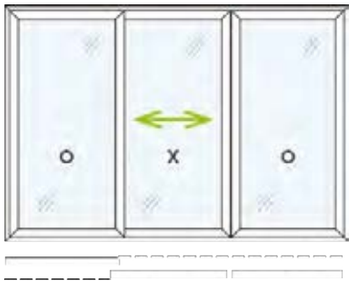
For more information visit www.liniar.co.uk/doors/patio

# **Patio** configurations

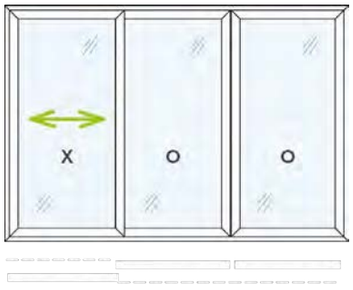
### 2 Pane
### Style OX/XO



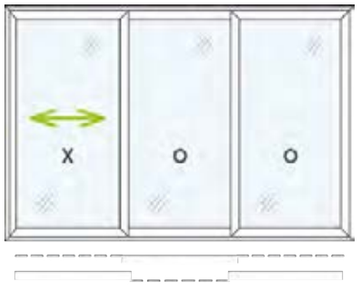

### 3 Pane
### Style OXO



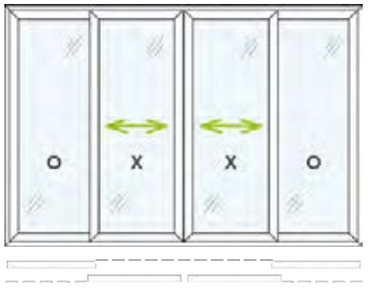

### 3 Pane
### Style XOO/OOX




### 3 Pane
### Style OOX/XOO (Optional)




### 4 Pane
### Style OXXO




# **Patio** doors

Don't compromise on security – the patented ModLok™ technology built into every Liniar patio door means it will help to protect your home.

Fitted with Liniar's revolutionary multi-wheeled 'air glide' system, the Liniar sliding patio door is perfectly balanced and family friendly to operate. Other patio door systems are operated by just four steel wheels – the Liniar door features eight hard-wearing self-lubricating acetal wheels, making it feel like it's floating on air.

The built-in brushes gently sweep away any minor debris each time the sliding door is closed, aiding its silent action and helping it to maintain efficient operation. Enabling large apertures up to four panes wide, the Liniar patio system takes a traditional product and turns it into a modern, energy efficient entrance to your garden or conservatory – with U-values as low as 1.0 W/m²K.

The patio door has been meticulously tested to ensure that it not only meets but exceeds the applicable British Standards for weather performance. Liniar's in-house robot has also subjected the door to a tough regime of cyclic testing in a purpose built design laboratory, with over 28,000 full opening cycles achieved – more than twice the amount required by British Standards for this type of door.

The Liniar patio system is also one of the most secure on the market. Liniar's patented ModLok™ modular locking mechanism was developed by Liniar in conjunction with Yale, the trusted brand for locks sold all over the world.

A brand new concept in locking technology, ModLok™ combines steel reinforcing with a high security locking mechanism to offer unparalleled security. With four hook bolts plus two shoot-bolts at the top and bottom of the sliding door, the door has been designed so that hooks do not protrude into the room even when the door is open.

Available with mechanical jointing, the components of the patio frames can be supplied separately, rather than being welded together in one complete pane, to be fixed together on site. This makes it easier for the installer to transport and handle and opens up the option of a patio door to those who have limited access to the rear of their property.

The Liniar ModLok™ patio system needs to be experienced to fully appreciate the ergonomic design, the effortless opening mechanism and the smooth and noiseless 'air glide' motion. The patio system is so versatile, you could choose to have a midrail added to one or more panes – or even a letter box if required! Visit your nearest showroom to see it for yourself.

Your installer will be able to advise you on the options available, or visit the Liniar website at http://www.liniar.co.uk/doors/patio to find out more about patio doors.

Options at a glance:

- EnergyPlus 6-chamber frame
- Sculptured (curved) styling
- 28mm double or triple glazed units
- Part M compliant low threshold available
- Optional midrail, optional letterbox
- Wide choice of coloured and foiled frames
- Choice of black, white, dark and light chrome and gold handles.

White four pane Patio door

love

# The Liniar range of bi-folding doors

## Open up an entire wall of your home.

Bi-folding doors are the perfect way for you to create space, let in fresh air and flood your home with natural daylight. Doors fold back, concertina-style, and are available in a huge range of styles, sizes and configurations. The Liniar design team created the first bespoke standard PVCu bi-fold door on the market, and followed it two years later with the development of the ModLok™ bi-fold system; featuring a combined aluminium reinforcement and multi-point locking system to enable bigger and wider doors to be manufactured.

The Alumina by Liniar system offers a true aluminium bi-fold door with the benefits of high thermal efficiency and the same sculptured styling as the Liniar window range. With the option of foiling to create a warm touch, the Alumina bi-fold is able to span even greater heights and widths.

Why choose Liniar bi-folding doors:

- Highly secure, with super smooth bottom rolling action and modular locking technology
- Cycle tested to more than 120,000 full opening cycles
- Design features including discreet magnets and folding keys
- Optional thermally broken Part M compliant low threshold with no need for trench excavation.

For more information visit www.liniar.co.uk/doors/bifold

# Bi-fold door configurations

The Liniar bi-folding door range has a wide variety of options when it comes to sizes and opening configurations – with the Standard range available up to 4 panes wide, the ModLok™ version up to 7 panes wide and the Alumina system up to 7 panes wide and 2.5m high.

Our door pane numbering works like this:

- The first number shows the number of doors in total within the frame.
- The second number shows the majority of doors folding back to either left or right.
- The third number shows the balance of doors opening in the opposite direction.

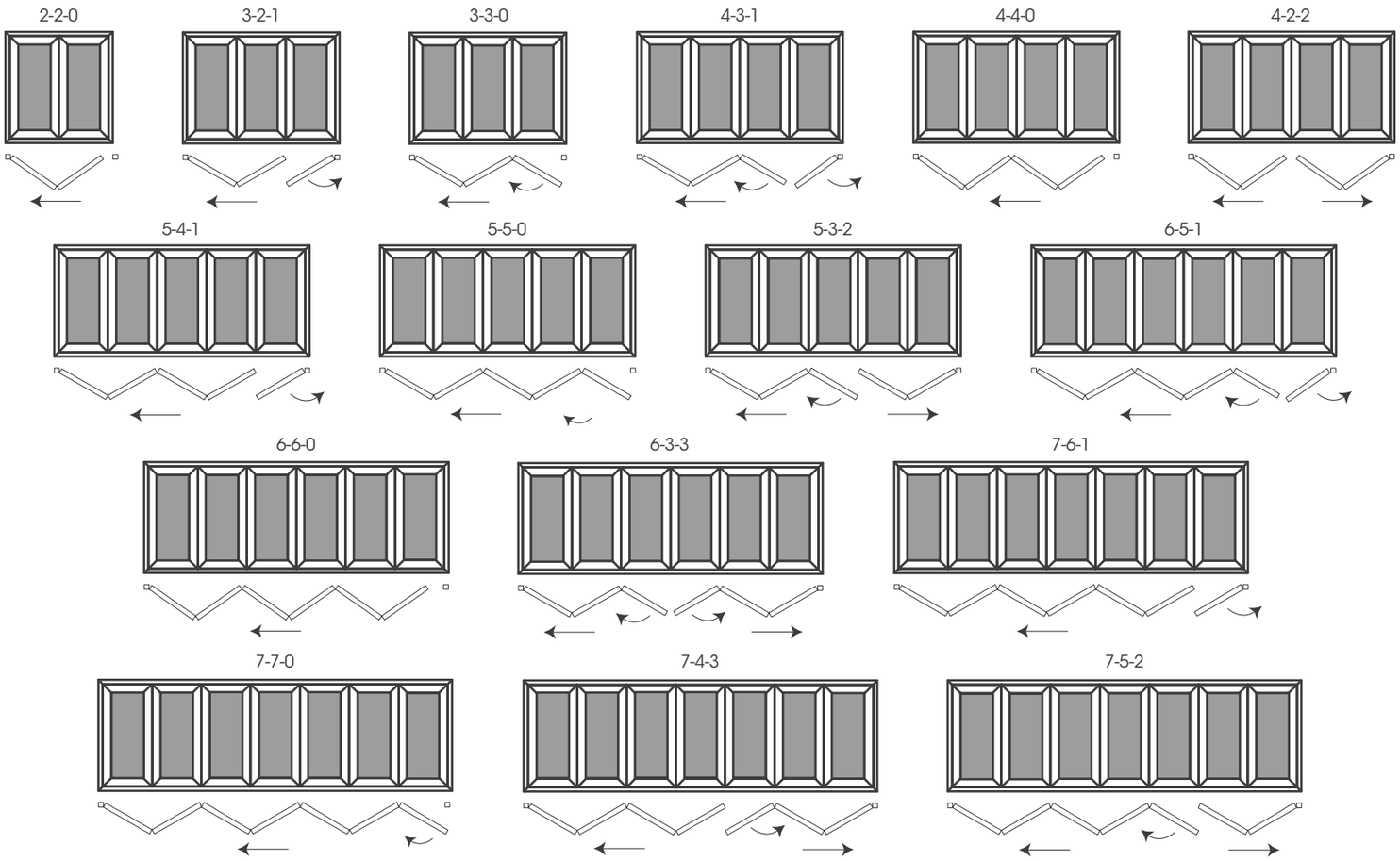
So, a 4-3-1 bi-folding door would be four panes wide, with three doors folding back to one side of the frame, and a single opening door on the other.

You can choose to have your door made with the majority of panes opening on the left or the right, and inward or outward opening for maximum versatility.

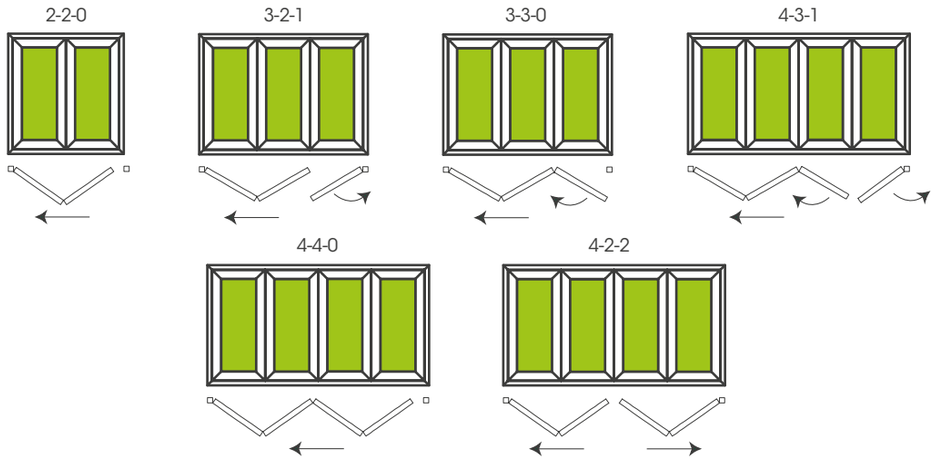
To see all opening/closing sequences visit our website at:

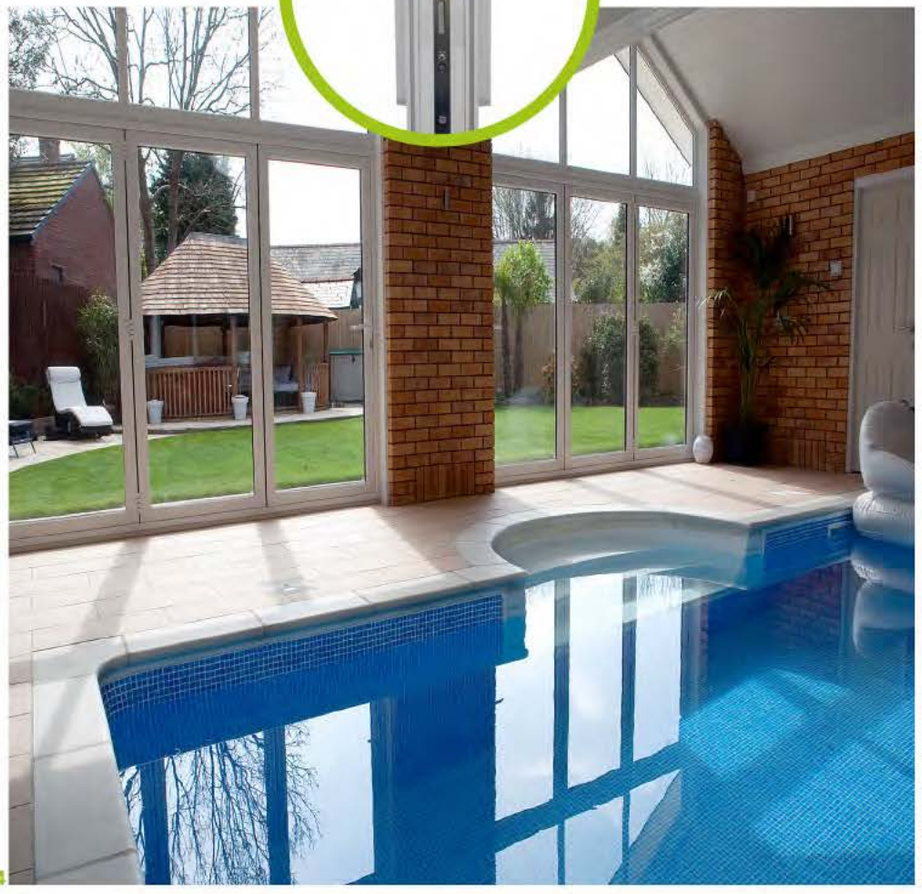
www.liniar.co.uk/bifoldopeningclosing

## ModLok™ and Alumina configurations




## Standard configurations





# Standard bi-fold doors

## The standard Liniar bi-fold system offers a cost effective option to open up a wall of your home, up to four panes in width.

The first bespoke PVCu bi-folding door system on the market, the standard Liniar bi-fold provides a truly stunning alternative to French or sliding patio doors.
The innovative Part M low threshold option is just one of the safety features included, making the Liniar bi-fold both family and wheelchair friendly.

On top of all of that, Liniar's bi-fold doors offer excellent levels of energy efficiency, alongside superb security features – this all adds up to create a beautiful space-saving solution for your property that will also hugely enhance its appearance and value.

The standard Liniar bi-fold can achieve a U-value of 1.3 W/m²K when fitted with cost effective double glazed units, which means you'll be able to enjoy a warmer and quieter home as well as lower energy bills.

Your installer will be able to advise you on the options available, or visit the Liniar website at http://www.liniar.co.uk/doors/bi-fold to find out more about the standard bi-fold.

Options at a glance:

- Standard 4-chamber frames
- Sculptured (curved) styling
- 28mm double glazed units
- Part M compliant low threshold available
- Wide choice of coloured and foiled styles
- Choice of black, white, dark and light chrome and gold handles.

# ModLok™ bi-fold doors

## Liniar's second generation bi-fold combines the structural benefits of an aluminium door set with the thermal efficiency of PVCu up to 7 panes wide.

The Liniar ModLok™ bi-folding door includes a seamless reinforcing and locking mechanism. This not only offers the highest security standards, but enables the doors to span even larger and wider sizes.

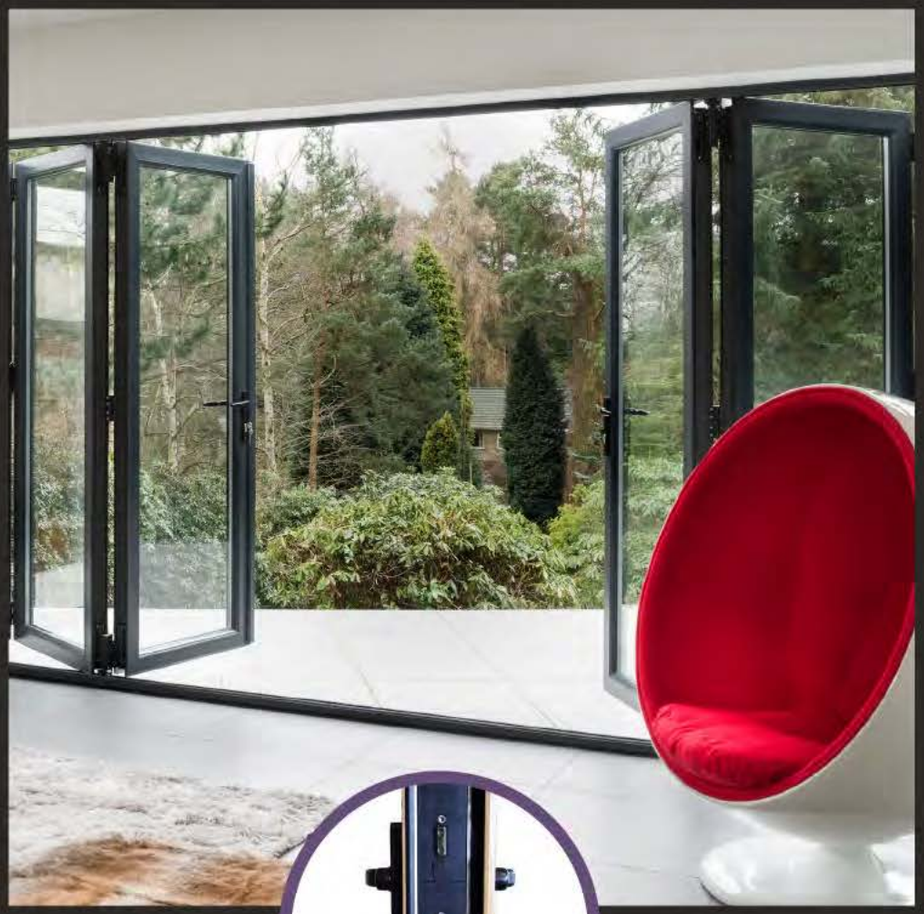
Built in anti-lift features and anti-bump cylinders combine to bring you peace of mind. ModLok™ also offers enhanced security features, including three opposing hooks and two shootbolts built in to every master door, plus two anti-lift shootbolts on every slave door. The exo-skeletal system ensures only the master door will open first, so there's no chance of spraining locks by trying to open the wrong door – and folding keys mean no dents!

With Liniar's foiled woodgrain-effect options, your bi-folding doors can emulate the natural look of timber. The Liniar ModLok™ bi-fold can achieve a supremely energy efficient U-value of 1.0 W/m²K with triple glazed units.

Your installer will be able to advise you on the options available, or find out more on the Liniar website at http://www.liniar.co.uk/doors/modlok-bi-fold.

Options at a glance:

- EnergyPlus 6-chamber frames
- Sculptured (curved styling)
- 28mm double glazed or 36mm triple glazed units
- Part M compliant low threshold available
- PAS 24:2012, Secured by Design and Part Q
- Choice of black, white, dark and light chrome and gold handles.



# Alumina Bi-fold doors

## Made from aluminium, the Alumina by Liniar range delivers high thermal efficiency with the only sculptured aluminium bi-fold created to fully match PVCu windows.

The very latest product development from Liniar, the Alumina bi-fold was created to offer a true aluminium bi-fold for large apertures where the panes can reach up to 2.5m high for floor-to-ceiling glass.

The only fully sculptured aluminium bi-fold doors on the market, Alumina will match the exact shape of Liniar sculptured windows. Not only that, you can choose to have the frames supplied with factory fitted foils for a warm touch finish and a seamless colour match.

With the same hardware as the ModLok™ bi-fold system you can rest assured of the highest security features, including three opposing hooks and two shootbolts built in to every master door, plus two anti-lift shootbolts on every slave door.

Designed from the ground upwards with thermal efficiency firmly in mind, the Alumina system breaks the usual rules of standard aluminium bi-fold doors and addresses tomorrow's performance requirements today.

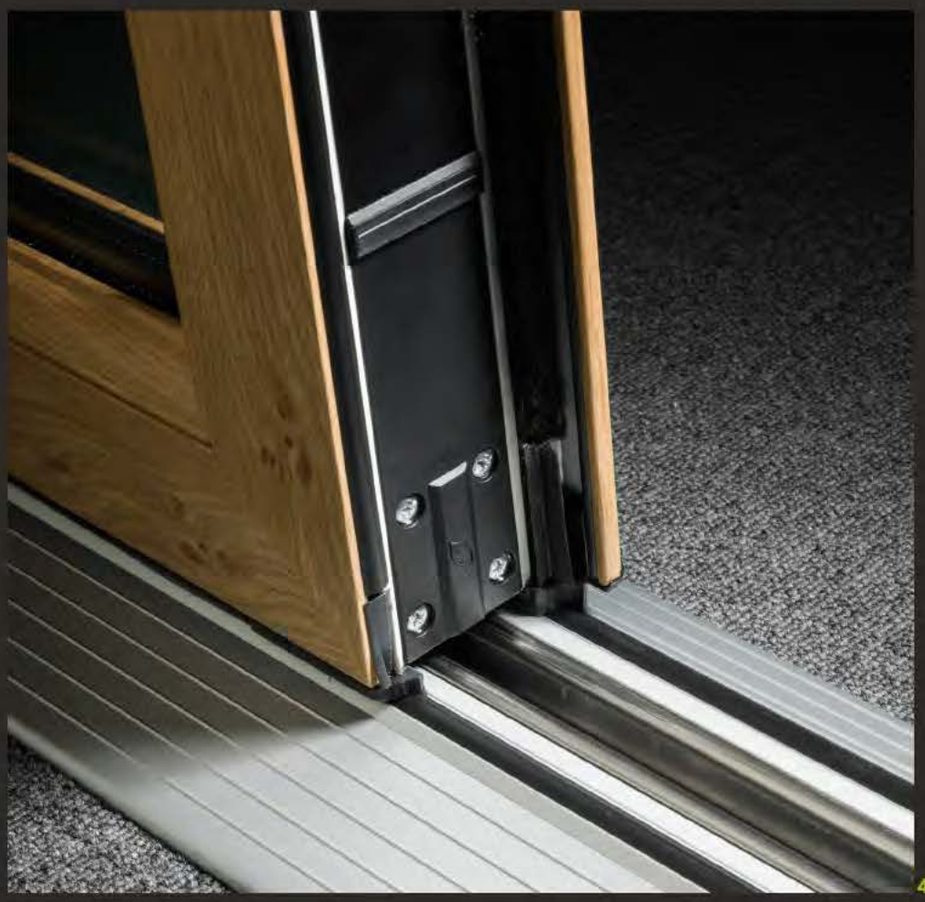
An innovative combined lock and thermal insert, or barrier, gives the Alumina door a supremely high energy rating and U-values as low as 1.2 W/m²K. The Liniar design team has combined the ultimate specification of security with a high strength engineering polymer lock body – so the lock itself acts as a thermal break, boosting the door's thermal performance compared to traditional aluminium doors. With configurations spanning up to 7 panes across, and each individual sash up to 1.2 metres wide and 2.5 metres high, your Alumina bi-folding door can open up an entire wall of your home up to 6.5 metres in width.

The doors are bottom rolling to ensure no additional stress is placed on the building's lintels, with stainless steel rollers guaranteeing a light, smooth operation along the bi-fold track. You can choose from three different thresholds for your Alumina bi-fold; it's supplied as standard with a rebated aluminium frame that runs continuously around the doors to form the most weathertight seal; you can select an aluminium low threshold which is just 23.5mm high at its highest point, for a seamless entrance and exit to your home; or add a tray to make the doors Part M compliant for wheelchair access and family living.

Your installer will be able to advise you on the options available, or visit the Liniar website at **http://www.liniar.co.uk/doors/alumina-bi-fold** to find out more about the Alumina bi-fold.

Options at a glance:

- Aluminium frame with patented polyamide lock
- Sculptured (curved) or chamfered (bevelled)
- 28mm double glazed or 36mm/40mm triple glazed units
- Part M compliant low threshold available
- Wide choice of foiled frames from stock
- Or sprayed in the colour of your choice
- Choice of black, white, dark and light chrome and gold handles.



Liviar Loves...

7016 Grey 6-3-3 Alumina Bi-fold door

# The energy efficient Liniar conservatory

## Create an additional room in your house with a fully matching conservatory.

Liniar's EnergyPlus conservatory roof is available in a stunning range of colours from stock and is designed to match perfectly with the rest of the Liniar window and door ranges.

With a host of patented innovations, including twin-walled EnergyPlus top caps, patented glazing slip prevention *(patent granted: GB2378207)* and built-in security features, a Liniar conservatory will add value to your home and offer additional space for you and your family to enjoy, all year round.

Each Liniar conservatory is lovingly designed and built to your specific requirements and is available in a wide number of styles, shapes and configurations. Your Liniar installer will be pleased to discuss your options and help you design your dream conservatory.

Why choose a Liniar conservatory?

- Thermally efficient, your Liniar conservatory can be used all year round.
- Fully bespoke, each roof is individually designed and built just for you.
- Patented design features help to make the system 'best in class'.
- Matches perfectly with the Liniar window range for a beautiful finish.

For more information visit www.liniar.co.uk/conservatories

# Roof styles

Liniar conservatories are available in a wide range of styles, including the most popular as shown below.

## Edwardian

Also known as Georgian, this style is square or rectangular with a high, sloping roof. Its imposing style and finishing touches allow you to maximise your living space.

## Lean-to

This style offers a simple, cost effective solution for bungalows and porches, allowing maximum space in an economical style, and is often a popular choice.

## Double hipped

With a pitched roof on both sides, this style strikes the perfect balance between style and a seamless fit with your home. The front facing pitched roof fits with most properties.

## Victorian

One of the most popular styles of conservatory, the Victorian consists of a bay front, a steeply pitched roof and ornate ridge details – with either three or five facets.

## Gable

Fully glazed right up to the apex, this style also has a square or rectangular footprint. Offering a stunning impact, this is often called the 'sun burst effect'.

## Combination

Offering the ultimate in flexibility, this style combines one or more styles to create the perfect shape for your home and garden.

# The Liniar conservatory

## Everything you need for the perfect conservatory - all matching from Liniar.

A conservatory is made up of several different components – usually brick walls or PVCu panels, with windows above, an entrance door to link it to your home and an exit door to open it up to your garden – along with a roof. On the exterior you'll see guttering and drainpipes, together with a decorative finish to the roof's apex.

When building a conservatory, your installer may use components from different manufacturers. However, this doesn't always guarantee a perfect colour match, and also means that if there is a problem further down the line, there may be several different points of contact at different manufacturers in order to rectify the situation.

By choosing to install a full Liniar conservatory, not only will you be covered by a straightforward, single 10-year profile guarantee, you'll be sure of every product matching – from a Liniar ModLok™ patio door to enter the conservatory, to casement and bi-fold windows along the sides and a ModLok™ bi-folding door with low threshold opening onto a beautiful decking area.

The roof itself is supplied in kit format for installers, giving them everything they need to carry out a fast, efficient installation.

Options at a glance:

- Fully bespoke and made to order
- Wide choice of styles, design and colours
- Choose self-cleaning, solar control or uncoated glass
- Polycarbonate roofs also available
- Traditional finials or contemporary blanking trim
- Standard tie bar or contemporary stainless tie wire

# Orangeries & lanterns

## Open up your room to the sky with a lantern roof.

A Liniar lantern style roof makes a stunning statement of elegance and grandeur. Ideal for Georgian and Victorian period properties, the lantern style is often chosen to house swimming pools, orangeries or for larger conservatories. The lantern style dates back to the 19th century, with many stately homes still featuring them today, including Kew Gardens.

A majestic and grand option for larger houses, lantern conservatories are spacious and allow an uninterrupted view of the sky. The Liniar lantern roof features EnergyPlus top caps and beautifully finished end caps so it looks as good from the outside as it does from the inside.

Smaller lantern roofs can be added to flat-roofed buildings to add light and height in the form of a skylight – ideal for extensions or to give refurbishment projects a modern, open feel.

Whichever your choice of style or size of roof, the Liniar lantern roof is designed to incorporate a wall pivot, so the glazing itself works as the drip. This means no separate guttering is required, providing a neater, more attractive finish to your lantern roof from the exterior. End caps are also fully foiled to match, giving a sleek, polished appearance to the roof – and you could also add clever mood lighting inside the roof so it looks as good after dark as it does during the day.

Liniar lantern roofs help to illuminate homes with the same outstanding energy efficiency as the rest of its range of windows, doors and roofs, benefitting from all of the superior features of the Liniar roof system – including EnergyPlus twin-walled, strong and durable top caps.

A stunning statement for your home, lantern roofs are supplied in the double-hipped roof format and are made to measure to your exact requirements and specifications.

## Why stick to white?

### The Liniar range comes in a wide variety of colours and finishes.

The basic Liniar PVCu profile is available in not just white, but also cream, caramel, brown and black substrates to offer a personalised appearance*

White | Cream | Caramel | Brown | Black

– or why not change its appearance completely by choosing one of our authentic foil finishes?

Liniar's coloured and woodgrain effect foils are factory fitted at the production stage, so you can rest assured of a perfect finish. Guaranteed for a minimum of 10 years, foiled PVCu is a low-maintenance alternative to timber as it won't rot or need repainting; all it requires is an occasional clean with soapy water.

Every Liniar product is made in a wide choice of stocked coloured foils, ensuring short lead times when your project is urgent. If you're not in a rush, you could select a completely bespoke colour and finish from the huge range available. You can even select the substrate colour and choose to have the foil applied on just the interior or exterior only if you prefer.

Please ask to see a Liniar foil swatch booklet to help you select the perfect colour choice.

For the range of foiled finishes available on the Alumina bi-fold, please see the separate swatch booklet or brochure.

## Standard foils

White Foil



Cream Foil

Chartwell Green

Irish Oak

Golden Oak

Rosewood

Mahogany

7016 Grey

Black

## Special foils

Cedar

Oregon

Anteak

Sapeli

7038 Grey

7155 Grey

7012 Grey

7015 Grey

7016 SM Grey

Blue

Dark Green

Dark Red

All colours are representative only - please ask to see a Liniar foil swatch booklet for accurate colours and finishes.

* Not all Liniar products are available on all substrates - please refer to the Liniar foil swatch booklet.

# More options to consider

## Georgian Bars

Unlike other astragal bars, Liniar Georgian bars are designed to simply snap into place and won't fall off. They also offer a more authentic appearance than adding aluminium bars within the sealed unit.

## Thresholds

All Liniar doors are supplied as standard with PVCu outer frame and optional cill. You can also select a standard aluminium low threshold or a Part M compliant full or half aluminium threshold.

## Arches

Liniar PVCu profile can be shaped to give your installation a truly bespoke appearance. Offered by a limited number of specialists, arching can add modern or contemporary styling.

## Patterned Glass

A huge range of etched and patterned glass is available in both double and triple glazing for your Liniar windows, doors and sidelights. Ask your installer for the options they can offer.

## Fire exits

It's important for every homeowner to plan an exit route in the unlikely event of a house fire. Liniar French and Tilt & Turn windows are ideal to provide a practical solution for your family's safety.

## Child safety

If your windows are intended to open fully, you may wish to fit child restrictors for additional safety for your family. Child restrictors can be fitted to almost any Liniar window.

## Hinge guards

Optional hinge guards add a further level of security to your Liniar windows and help to prevent the moving sash from being forcibly opened from the outside.

## Handles

Locking handles should be fitted for maximum security – and the choice of colours, styles and designs is almost endless. Ask your installer to show you the full range offered.

Finished window and door products are manufactured by independent Liniar fabricators, who can offer a wide range of finishes including glass, handles and hardware. Please see your local fabricator for more details about specific requirements.

# The finishing touch

Complete your window installation with perfectly matching roofline products, by choosing Liniar's high quality fascias, soffits and trims.

## Thicker and stronger

Manufactured in-house by Liniar, all fascia boards are made using the latest advancements in extrusion equipment and technology, ensuring the highest quality.

At 20mm thick, instead of the customary 16mm, Liniar's fascia boards provide greater strength than other boards. Longer return legs and extra cover on mouldings help the installer to fit them more quickly. And pricing is competitive, with the thicker 20mm boards being similar to 16mm prices elsewhere.

## Fully matching

Liniar's boards and trims are available from stock in the same choice of foiled colours as the Liniar sculptured window suite, with special colours and finishes also being available with a longer lead time.

Mouldings will be foiled to match for a perfect finish to installations.

## A single guarantee

As the range is covered by Liniar's 10-year guarantee against discolouration, warping or splitting, it makes sense to order all Liniar products for a single point of contact.

The range of products include:

- Fascia boards
- Foam soffit boards
- Hollow soffit boards
- Flat boards
- Capping boards
- Utility boards
- Replacement boards
- 135° internal and external corners
- 90° internal and external corners
- Joint trims

# The Liniar outdoor range

## Decking

Low maintenance PVCu decking is not a new concept – but with vast experience in the market, Liniar's decking range is the only one that's tooled, modelled, designed, manufactured, foiled and stocked at its own purpose-built facility in Derbyshire.

Built on a galvanised steel sub-frame, there are no components to rot, warp or splinter, making the Liniar decking system a low-maintenance option for gardens and outdoor areas.

Teamed with a fully sculptured balustrade system, which can be finished with the same woodgrain-effect factory fitted foils as the window system, Liniar's strong 225mm wide deckboards are available in classic stippled or woodgrain patterned planks and are fully tested for fire safety, slip resistance and load bearing.

**For more information visit www.liniar.co.uk/decking**

## Fencing

Offering an attractive and low maintenance alternative to more traditional materials, Liniar PVCu fencing systems are lightweight to carry and easy to install, whilst being surprisingly strong.

From fence posts reinforced with steel inserts to gravel boards and full panels, the Liniar system is fully interchangeable with other fencing systems including concrete and timber, making it ideal for an enduring replacement solution

Strong enough to withstand storm force winds, PVCu fencing is durable and easy to install, with no specialist equipment required – and the added bonus of no sanding, staining or painting needed year after year!

**For more information visit www.liniar.co.uk/fencing**

## Piling

Used in a wide variety of landscaping projects, soil and water retention and flood prevention, Liniar piling offers an eco-friendly and long lasting alternative to unattractive and expensive steel or timber piles.

Made from interlocking sections, Liniar's piling is made from 100% recycled materials and is easy to install manually without the need for specialist equipment in the right ground conditions. Sheet piles come in a choice of styles and can be tied back for even greater strength.

Liniar piling systems are used by the Environment Agency to preserve peat bogs in moorland areas and prevent flooding on lower ground, as well as householders living in floodplain areas or close to river banks to prevent flooding or bank erosion.

Also used extensively in the highways and utilities sectors, Liniar plastic piling is surprisingly strong and offers a cost effective solution for a wide variety of challenges.

## Log Pile

The unique appearance of Liniar Log Pile makes it ideal where an attractive finish is required. Used extensively in new home development for garden retention on sloping ground, as well as providing a striking perimeter to the banks of ponds and lakes, Log Pile is manufactured with a timber composite fascia for a natural appearance.

Log pile comes in 6m lengths of three 'logs' which lock together on each side. You can add caps to the top or fill each 'log' with soil and plants to blend in with its environment. The whole Liniar piling range is resistant to most chemicals, won't rot or rust and offers a cost effective, unique, alternative to other forms of erosion control and slope stabilisation.

**For more information visit www.liniar.co.uk/plastic-piling**

# 7 **great reasons** to choose Liniar

**Innovative** - continued investment in infrastructure, technology and a great team of people results in forward-thinking designs.

**Energy efficient** – designed from scratch to achieve the pinnacle of thermal performance and retain more heat in your property

**Safe and secure** – engineered with built-in security features and approved by independent testing facilities

**British made** – frames are extruded in our state-of-the-art factory in the heart of Derbyshire

**Lead free** – all Liniar profiles are extruded using materials that are 100% lead free

**Quality assured** – backed with ISO 9001 accreditation for your peace of mind

**Guaranteed** – all Liniar frames are guaranteed to not warp, split or discolour for a minimum of 10 years

Your Liniar stockist is:

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