

Technical information

ModLok™ bi-fold door

- Sculptured suite
- 28mm double and 36mm triple glazing
- Multi chambered EnergyPlus profiles
- U-values from 1.3 (DGU) and 1.0 (TGU)
- Patented co-ex gasket

Accreditation



Colour Options

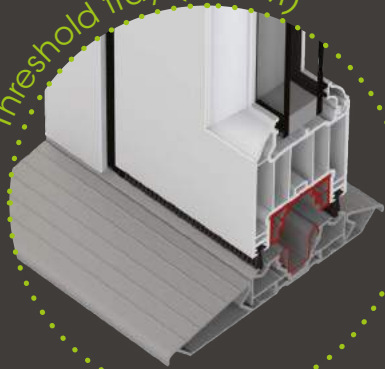


Additional colours are available to order as specials.
The colours shown in this brochure give an indication only.

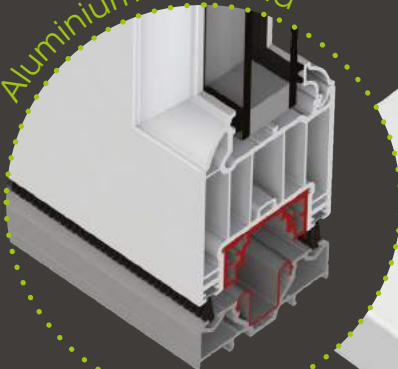
Product	Dim. A
PVCu outer frame & sash MBF091 & MBF092	134mm
Aluminium thresh. & sash MBF291 & MBF092	115.5mm

Product	Dim. B
PVCu outer frame MBF091	62mm
Aluminium threshold MBF291	23.5mm

Threshold tray (Part M)



Aluminium threshold



LAN275 threshold tray makes MBF291 "Part M compliant" when fitted together

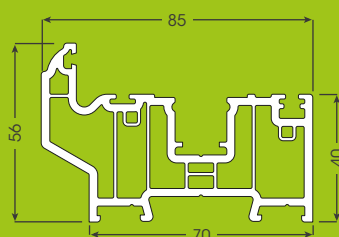


Vertical Cross Section

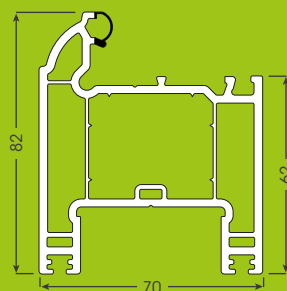
Bi-fold product chart

Standard Bi-Fold

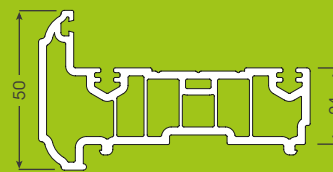
Frames



LBF091
Bi-Fold Outer Frame



LBF092
Bi-Fold Sash



LBF191
Meeting Stile

Ancillaries



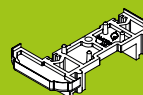
LBF192
Channel Capping



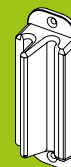
LBF193
Eurogroove Insert



LBF391
Low Threshold Moulding



LMO191
Meeting Stile



LBF043
Tenon/Finger Pull

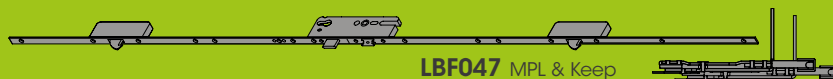
Locks



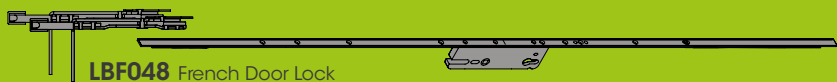
LBF045 Espag Non Locking



LBF045L Espag Locking

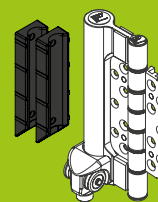


LBF047 MPL & Keep



LBF048 French Door Lock

Hardware



LBF050
Double Roller



LBF060
Single Roller



LSR091
Bi-Fold St. Stl Track



LSR092P (Punched)
Sash Reinforcing

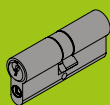


LBF291
Low Threshold

Steel or aluminium

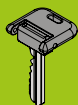
Common Components

Cylinders



MBF031N
45/45 Anti Bump, Nickel

MBF032N
2 x Key Alike,
45/45 Anti Bump, Nickel



MBF033
Folding Key Blank

Gaskets



MBF196
14mm Brush Pile



LBF197
Q-Lon (Bi-Fold
Outerframe)



MBF194
Q-Lon
(Bi-Fold Sash)

Ancillaries



LMO275
Low Threshold Tray
End Cap

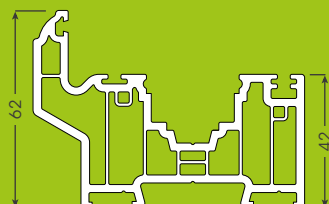


LMO301
Glazing Platform

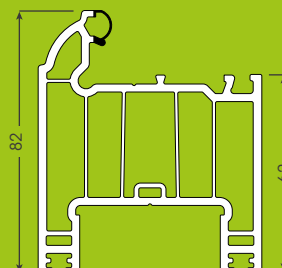


ModLok™ Bi-Fold

Frames


MBF091

ModLok Bi-Fold Outer Frame


MBF092

ModLok Bi-Fold Sash

Ancillaries


MBF093

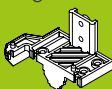
ModLok Bi-Fold Meeting Stile Cover


MBF191

Channel Capping


MBF192

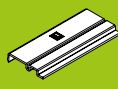
Screw Capping


MBF391

Low Threshold Moulding


MBF392

Corner Locator

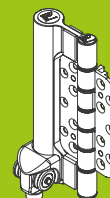

LMO311

36mm Glazing Platform


MBF393

ModLok Bi-Fold Meeting Style End Cap

Hardware


MBF050

Double Roller


MBF060

Single Roller

Locks


MBF045 ModLok Bi-Fold Espag Non Locking

MBF045L ModLok Bi-Fold Espag Locking

MBF047 ModLok Bi-Fold MPL & Keep

MBF048 ModLok Bi-Fold French Door Lock Kit

MSR091

ModLok Bi-Fold Bottom Track


MAR091

ModLok Bi-Fold Top Track


MAR092

ModLok Bi-Fold Reinforcing Sash (2.1m)


MAR093

ModLok Bi-Fold Meeting Stile (2.15m)


MBF291

ModLok Bi-Fold Low Threshold

Steel or aluminium

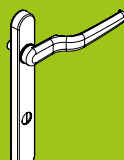
Hardware


MBF071

Butt Hinge


MBF072

C Handle


MBF080

Door Handle


LBF081

Slim Door Handle


LBF082

Ext. Slim Door Handle


LBF041

Door Magnets


MBF042

Escutcheon

Beads


LCW041

Chamf. Bead


LSW041

Sculp. Bead


LSW042

36mm Bead

Aluminium


LAN275

Low Threshold Tray


LAN278

Low Threshold Half Tray

Ancillaries



Ensure a perfect match with the Linar range of trims and couplings. Specifying a full Linar installation ensures a single point of guarantee in addition to colour matching products.

Cills, trims and reinforcements

Linar cills are available in five sizes along with a range of end caps, jointers and reinforcing. Cills are designed to match the Linar suite and can be foiled to colour match the Linar range of window systems. Cills are multi chambered for strength.

Structural couplings

Linar have a comprehensive range of frame couplers, which are necessary for the combination of window sections. We have provided tables showing the end loads for all Linar couplers, which have been calculated in accordance with the BPF Code of Practice for the Survey and Installation of White High Impact uPVC Windows.

- Foiled to colour match the rest of the Linar range
- Snap together feature on 165mm cill, outer frames, low thresholds, frame extensions and 90° corner post
- 10, 20 and 50mm frame extensions available
- Acoustic head vent available to fit to all Linar products
- One piece door drip bar for ease of assembly

In this section

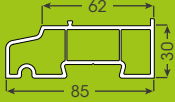
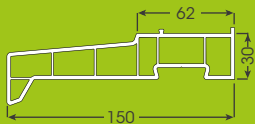
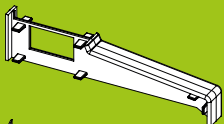
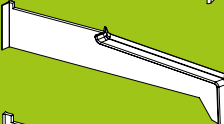
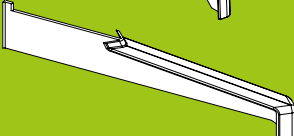
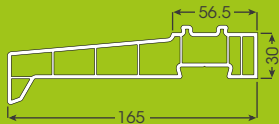
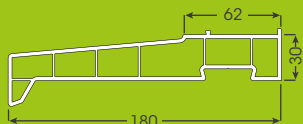
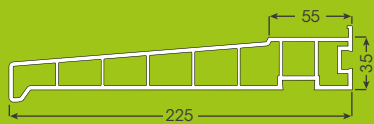
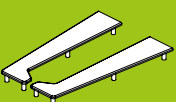
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Cills and associated items
Page 65

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Structural couplings
Page 66

Cills and associated items

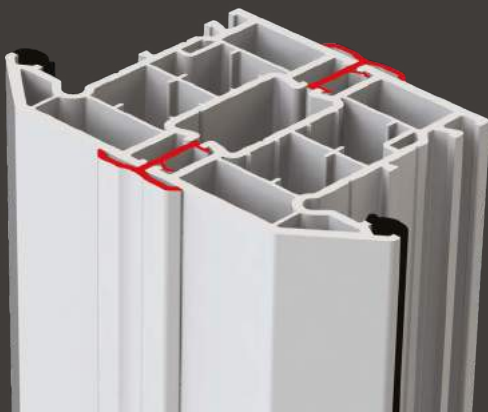
Cills	Related products
 LSL085 85mm stub cill	LMO386 85mm cill end cap 
 LSL150 150mm cill	LMO365 150mm cill end cap  LAN165 PVCu cill reinforcement  LMO354 150mm inline cill jointer  LMO355 150mm 135° cill jointer  LMO356 150mm 90° cill jointer 
 LCL165 165mm cill	LMO365 165mm cill end cap  LAN165 PVCu cill reinforcement 
 LSL180 180mm cill	LMO381 180mm cill end cap  LAN165 PVCu cill reinforcement 
 LCL225 225mm cill	LMO325 225mm cill end cap 

Structural couplings

These 'load tables' have been calculated in accordance with BPF Code of Practice for the Survey and Installation of White High Impact uPVC Windows and are only applicable for those joint profiles restrained at their centre. The load tables must not be applied to those joint profiles used in isolation.

All structural couplings are to be used with the corresponding Linar bay pole jack when used for end (axial) loadings.

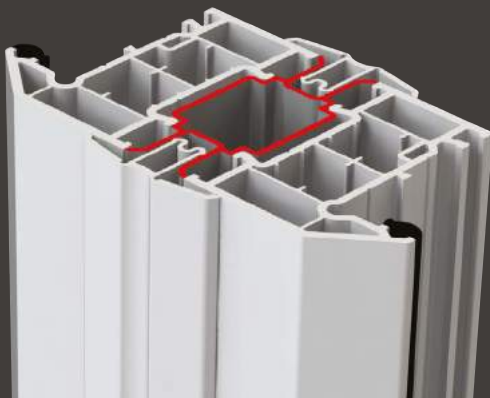
PVCu Butt Joint



The Linar PVCu Butt Joint is not designed to take any end loadings.

End loads for all the other Linar couplers are listed below

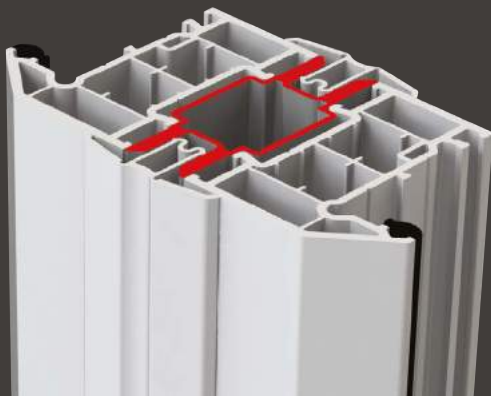
Standard Butt Joint



Length (mm)	Axial Load (tonnes)
500	2.49
600	2.34
700	2.24
800	2.16
900	2.04
1000	1.92
1100	1.79
1200	1.62
1300	1.38

Length (mm)	Axial Load (tonnes)
1400	1.18
1500	1.06
1600	0.94
1700	0.83
1800	n/a
1900	n/a
2000	n/a
2100	n/a
2200	n/a

Medium Duty Butt Joint



Length (mm)	Axial Load (tonnes)
500	3.60
600	3.43
700	3.23
800	3.13
900	2.91
1000	2.72
1100	2.54
1200	2.16
1300	1.85

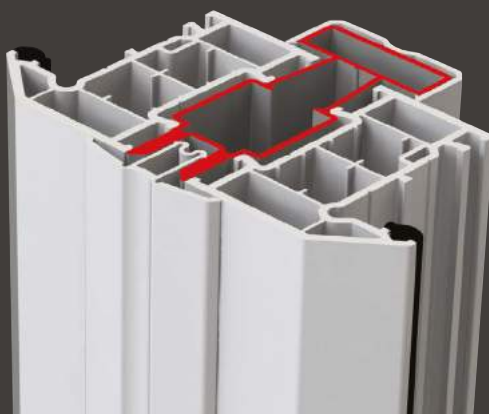
Length (mm)	Axial Load (tonnes)
1400	1.61
1500	1.43
1600	1.24
1700	1.09
1800	n/a
1900	n/a
2000	n/a
2100	n/a
2200	n/a

These tables should be used for guidance only.

N/A Joint profile IS NOT suitable for load bearing at this length and above.

Consult Joint profile IS suitable for load bearing at this length and above. Consult the Linar design office

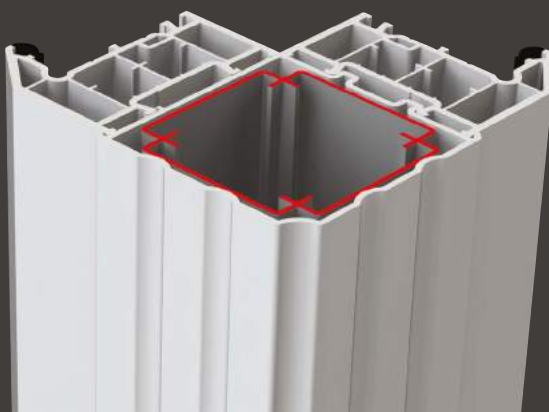
Heavy Duty Butt Joint



Length (mm)	Axial Load (tonnes)
500	4.37
600	4.23
700	4.05
800	3.83
900	3.68
1000	3.53
1100	3.35
1200	3.17
1300	2.98

Length (mm)	Axial Load (tonnes)
1400	2.62
1500	2.30
1600	2.01
1700	1.82
1800	1.63
1900	1.46
2000	1.30
2100	1.16
2200	n/a

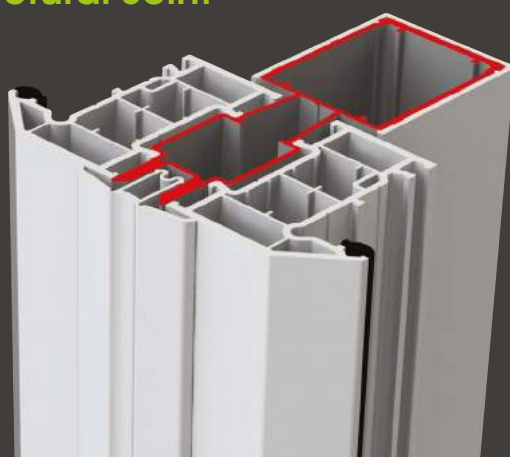
90° Corner Joint



Length (mm)	Axial Load (tonnes)
500	4.00
600	3.94
700	3.87
800	3.80
900	3.74
1000	3.67
1100	3.61
1200	3.55
1300	3.50

Length (mm)	Axial Load (tonnes)
1400	3.44
1500	3.37
1600	3.29
1700	3.21
1800	3.13
1900	3.08
2000	3.03
2100	2.98
2200	Consult

Structural Joint



Length (mm)	Axial Load (tonnes)
500	6.71
600	6.58
700	6.29
800	6.20
900	5.99
1000	5.69
1100	5.48
1200	5.39
1300	5.18

Length (mm)	Axial Load (tonnes)
1400	4.97
1500	4.76
1600	4.59
1700	4.33
1800	3.74
1900	3.57
2000	3.36
2100	2.89
2200	Consult

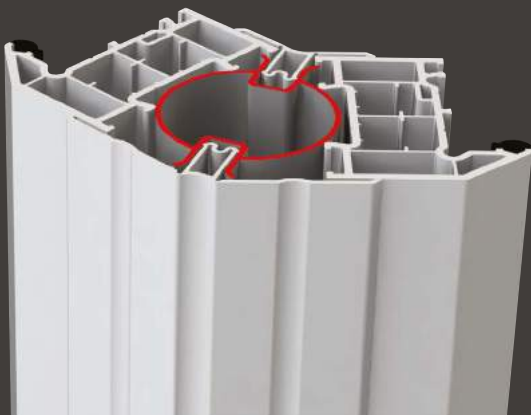
These tables should be used for guidance only.

Structural couplings

These 'load tables' have been calculated in accordance with BPF Code of Practice for the Survey and Installation of White High Impact uPVC Windows and are only applicable for those joint profiles restrained at their centre. The load tables must not be applied to those joint profiles used in isolation.

All structural couplings are to be used with the corresponding Liniar bay pole jack when used for end (axial) loadings.

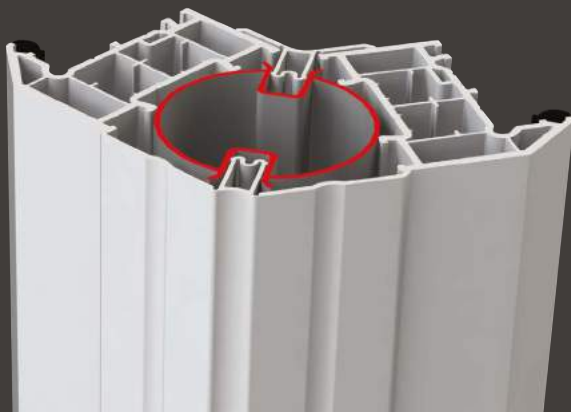
Small Bay Pole



Length (mm)	Axial Load (tonnes)
500	2.99
600	2.91
700	2.83
800	2.76
900	2.67
1000	2.56
1100	2.47
1200	2.35
1300	2.33

Length (mm)	Axial Load (tonnes)
1400	2.23
1500	2.15
1600	2.06
1700	1.96
1800	1.80
1900	1.63
2000	1.48
2100	1.34
2200	Consult

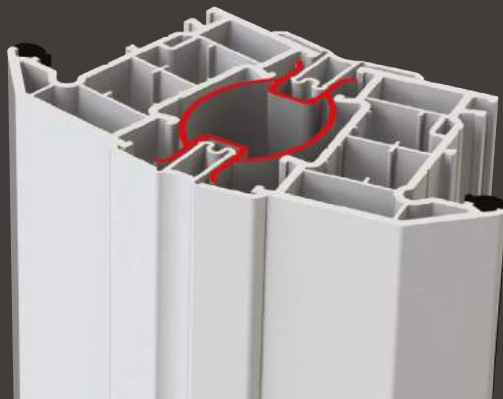
Large Bay Pole



Length (mm)	Axial Load (tonnes)
500	3.53
600	3.45
700	3.37
800	3.29
900	3.22
1000	3.16
1100	3.08
1200	2.98
1300	2.88

Length (mm)	Axial Load (tonnes)
1400	2.81
1500	2.74
1600	2.67
1700	2.59
1800	2.51
1900	2.43
2000	2.35
2100	2.27
2200	Consult

Bow Pole



Length (mm)	Axial Load (tonnes)
500	2.40
600	2.31
700	2.18
800	2.07
900	1.98
1000	1.87
1100	1.77
1200	1.64
1300	1.42

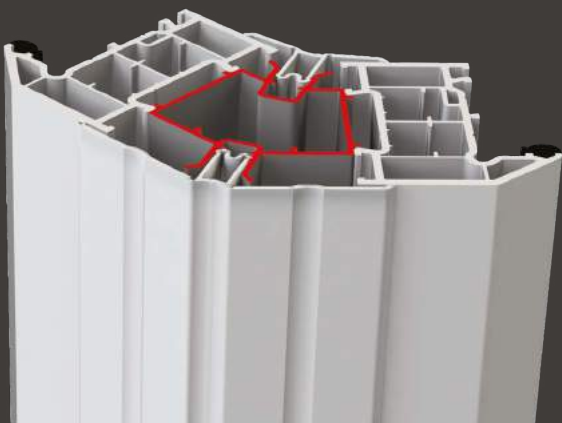
Length (mm)	Axial Load (tonnes)
1400	1.23
1500	1.07
1600	0.96
1700	0.85
1800	n/a
1900	n/a
2000	n/a
2100	n/a
2200	n/a

These tables should be used for guidance only.

N/A Joint profile IS NOT suitable for load bearing at this length and above.

Consult Joint profile IS suitable for load bearing at this length and above. Consult the Linar design office

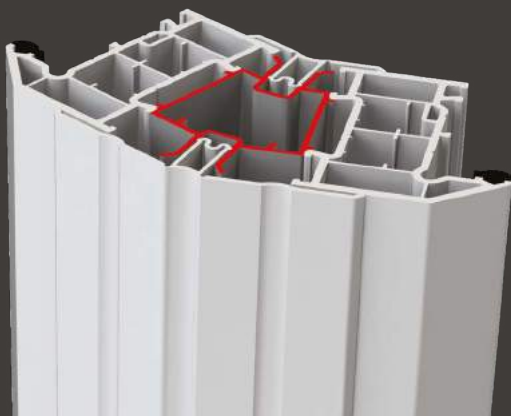
135° Joint



Length (mm)	Axial Load (tonnes)
500	3.40
600	3.31
700	3.21
800	3.14
900	3.07
1000	2.96
1100	2.85
1200	2.75
1300	2.68

Length (mm)	Axial Load (tonnes)
1400	2.60
1500	2.50
1600	2.41
1700	2.32
1800	2.23
1900	2.05
2000	1.87
2100	1.67
2200	Consult

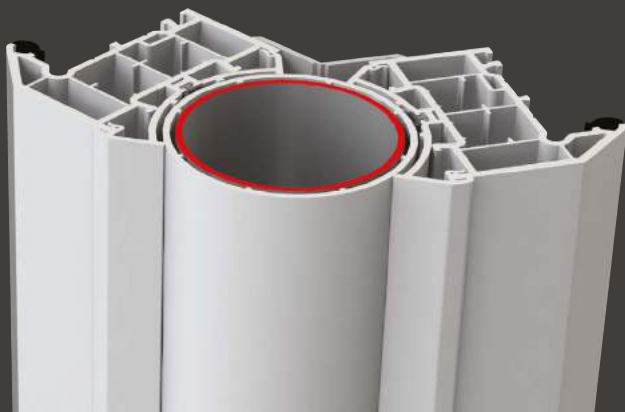
150° Joint



Length (mm)	Axial Load (tonnes)
500	3.08
600	2.98
700	2.90
800	2.79
900	2.67
1000	2.57
1100	2.48
1200	2.38
1300	2.30

Length (mm)	Axial Load (tonnes)
1400	2.17
1500	2.07
1600	1.87
1700	1.66
1800	1.49
1900	1.34
2000	1.23
2100	1.13
2200	Consult

Bay Pole Nest



Length (mm)	Axial Load (tonnes)
500	3.19
600	3.12
700	3.06
800	3.00
900	2.94
1000	2.88
1100	2.83
1200	2.79
1300	2.72

Length (mm)	Axial Load (tonnes)
1400	2.64
1500	2.57
1600	2.51
1700	2.46
1800	2.41
1900	2.35
2000	2.29
2100	2.23
2200	Consult

These tables should be used for guidance only.

Technical **information**



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Maximum sizes for windows and doors

Linlar windows and doors can be manufactured to the following maximum sizes.

Product Category	Width (mm)	Height (mm)
Casement Window (Top Hung)	Frame: 1300	Frame: 1300
Casement Window (Side Hung)	Frame: 700	Frame: 1300
Casement Window (Fixed)	Frame: 3000	Frame: 2000
Flush Sash Casement Window (Top Hung)	Frame: 1200	Frame: 1200
Flush Sash Casement Window (Side Hung)	Frame: 600	Frame: 1200
Tilt & Turn Window	Frame: 1500	Frame: 1500
Residential Door	Frame: 1000	Frame: 2150
French Door	Frame: 1000	Frame: 2150
Standard Bi-fold door* *	Minimum sash: 600 Maximum sash: 800	Sash: 2150
ModLok™ Bi-fold door* *	Minimum sash: 600 Maximum sash: 1000*	Minimum sash: 1850 Maximum sash: 2150*
ModLok™ Patio door	Sash: 1500	Sash: 2300

* Double glazing only. Consult Linlar Technical for triple glazing maximum size.

** Overall frame size should not exceed 6m (4m for foiled products)



White casement windows and
black composite door
David Wilson Homes



Wind loading

BS 6399-2:1997 gives dead and minimum recommended imposed loads for use in designing buildings. It applies to:

- new buildings and new structures
- alterations and additions to existing buildings and structures
- existing construction on change of use

For windows manufactured at an abnormally large size or those, which will feature within a glass facade please consult the Liniar design office for wind load calculations.

Calculations are performed in accordance with **BS 6399-2:1997, loading for buildings, code of practice for wind loads.**



CE marking

BS EN 14351-1:2006+A1:2010 Windows and Doors.

Product standard and performance characteristics. Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics.

- CE Marking became a legal requirement on 1st July 2013 for construction products supplied within the EU and the UK, including windows and external doorsets.
- By affixing the CE label, a manufacturer is declaring conformity with all legal requirements applicable to its products.
- CE Marking is a self certification scheme and requires minimal involvement with independent third parties.

It is the responsibility of the organisation supplying the complete product to market to provide the CE certification.

The responsibility to comply and provide a CE mark falls to the installer or organisation adding the glazed unit to the frame.

Failure to comply may result in prosecution, fines and possible custodial sentences.



Thermal efficiency



Where windows, roof windows, rooflights or doors are to be provided, reasonable provision in normal cases would be the installation of draught-proofed units whose performance is no worse than given in Table 1.

In addition, insulated cavity closers should be installed where appropriate. Where the replacement windows are unable to meet the requirements of Table 1 because of the need to maintain the external appearance of the facade or the character of the building, replacement windows should meet a centre pane U-value of 1.2W/m²K, or single glazing should be supplemented with low-e secondary glazing. In this latter case, the weather stripping should be on the secondary glazing to minimise condensation risk between the primary and secondary glazing.

Standard for controlled fittings

Fitting	Standard
Window, roof window or rooflight	WER Band C or better, or U-value 1.6 W/m ² K
Doors with >50% of internal faced glass	U-value 1.6 W/m ² K
Other doors	U-value 1.6 W/m ² K

Table 1

For more information refer to **Approved Document L 2013**

Survey and installation



Linair strongly recommends that all installations comply with the **code of practice for installation of PVCu window and door sets**.

BS8213 gives recommendations for the surveying and installation of non-load bearing windows and external doorsets of any material, to be installed vertically into the external face of buildings.

It gives guidance on the good practices necessary for the successful surveying and installation of windows and external doorsets in both new build and replacement situations. It is primarily aimed at installations in dwellings but much of the guidance given is relevant to other types of installations

For more information refer to **BS 8213-4:2007**



◀ White tilt & turn windows
Humphries House, Walsall

Fire safety



Any window provided for emergency egress purposes and any external door provided for escape should comply with the following conditions:

- the window should have an unobstructed openable area that is at least 0.33m² and at least 450mm high and 450mm wide (the route through the window may be at an angle rather than straight through).
- The bottom of the openable area should not be more than 1100mm above the floor.

For more information please refer to **Approved Document B**.

Condensation



Water vapour is naturally present in the atmosphere. Natural water content is increased by normal day to day living – for example, activity that generates steam such as cooking, bathing, laundering, boiling a kettle and even breathing.

The water vapour remains undetectable while floating in warm air – but upon contact with cold surfaces such as windows, mirrors and tiles, condensation occurs as the vapour turns into water droplets.

Traditional house construction allowed the escape of this water vapour through natural ventilation, including open flues of coal fires, air bricks and ill-fitting windows and doors – however the drive to conserve energy and reduce heating costs has led to the sealing of homes, resulting in trapped water vapour and increased problems of condensation.

With Liniar's highly energy efficient windows and doors, condensation can even form on the outside face of a double glazed unit, due to the outside surface being much colder than the inside.

Certain elevations of property can be more susceptible to condensation e.g. north facing.

Ventilation should also be provided by fitting ventilation or extraction units in the kitchen and bathroom and fitting wall vents to provide air flow.

Wheelchair compliance

Any external doors provided for wheelchair access purposes should comply with the following conditions.

- Requirement M1 will be satisfied if an external door providing access for disabled people has a minimum clear opening width of 775mm.
- The threshold is level, if a raised threshold is unavoidable, it has a total height of not more than 15mm, a minimum number of upstands and slopes, with any upstands higher than 5mm chamfered or rounded.

For more information please refer to **Approved Document M**



Ventilation

For both new and existing buildings the key aim of Part F is to provide a ventilation system capable of limiting the accumulation of moisture and pollutants originating within a building which would otherwise become a hazard to the health of the people living within the building.

For more information please refer to **Approved Document F**.



Total equivalent ventilator area (mm²) for a dwelling with any design air permeability

Total floor m ²	Number of bedrooms				
	1	2	3	4	5
< 50	35000	40000	50000	60000	65000
51-60	35000	40000	50000	60000	65000
61-70	45000	45000	50000	60000	65000
71-80	50000	50000	50000	60000	65000
81-90	55000	60000	60000	60000	65000
91-100	65000	65000	65000	65000	65000
>100	Add 7000 m ² for every additional 10 m ² floor area				



Irish oak casement windows
and 6-3-3 bi-fold door
Self Build



Hardware

The Liniar system is compatible with a wide range of quality hardware, resulting in better choice for the end user.

From child-friendly safety features such as restrictors, to security features including hinge guards, Liniar's network of approved fabricators can produce windows and doors to your exact specifications – with a huge choice of handles offering a contemporary or traditional appearance.

Bi-folding and patio doors offer Liniar's patented ModLok™ security technology including shoot-bolts, anti-lift and anti-snap features, and a choice of handles in white, black, gold or chrome.

For more information, see the Liniar Specifier's Centre at www.liniar.co.uk/specifiers.



Installer support

The full Liniar range has been designed to save time for installers, making it ideal for large scale commercial projects where speed is of the essence.

Bespoke glazing platforms mean double or triple glazed units are fitted to the frame more effectively, and Liniar's unique beading system provides a quick, easy and attractive finish.

The Liniar patio can be mechanically jointed, making it easier to install in hard-to-reach areas, and the low threshold option on both the patio and bi-fold systems doesn't require trench excavation, reducing preparation time.

Liniar's co-extruded gaskets ensure no draughts or leaks for the end user – resulting in fewer call-backs for installers.

With guidance for on-site fitters including a range of installation guides and videos to ensure the highest quality installations, the Liniar range is also fully supported by an in-house technical team to answer any queries.

At a glance....

- Glazing platforms to aid fitting
- Unique beading system for faster glazing
- Co-extruded gaskets mean fewer call-backs
- No trench excavation for low thresholds
- Full installation support for fitters.



Liniar 10 year guarantee



Liniar profiles are manufactured using tried and tested formulations from approved suppliers and will not warp, split or discolour for 10 years* from date of installation.

The Liniar guarantee is issued in association with our raw material suppliers and based on proven technology for UV stabilised products.

Further details, weathering data and full conditions can be supplied on request.

All products are to be installed to Liniar recommendations.

* Liniar bi-folding and patio doors consist of a wide variety of components that cannot be covered under one guarantee - see separate product guarantees for more information.

Specifier's centre



The Specifier's Centre on the Liniar website is the place you'll always find the very latest information.

In addition to legislative changes, the Liniar range is constantly being developed - so please check our online Specifier's Centre for updates and access to a wide range of content including:

- Product charts
- Case studies
- Certificates and guarantees
- CE Marking information
- Approved Documents
- WER calculator
- Hardware information
- Product fact sheets
- Operation and maintenance guide
- Installation guides
- Videos
- Finding an Approved Liniar Fabricator

www.liniar.co.uk/specifiers

If there's something you need but cannot find in the Specifier's Centre, please email us at info@liniar.co.uk and we'll do our best to help.

Further information

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www.liniar.co.uk

Useful links:

Specifiers centre: www.liniar.co.uk/specifiers

WER calculator: www.liniar.co.uk/wer-calculator

Compatible hardware: www.liniar.co.uk/hardware

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Thanks

Liniar would like to thank all those customers who contributed by kindly supplying images and case studies, along with the homeowners and developers who have let us photograph their properties.

We reserve the right to change or amend product specifications at any time in the interests of our ongoing commitment to innovation. To keep up to date join our mailing list by visiting www.liniar.co.uk/subscribe or scan the QR code.



Case study



Creating a sustainable development for Leeds PFI

The Leeds City Centre regeneration PFI project spans 7 blocks of high-rise apartments totalling 550 dwellings, together with almost 1,500 low-rise and new build houses. The project is being managed by developer Keepmoat.

The project commenced in December 2013 and is set to be completed in late 2015. The Liniar system was specified and is ideal for large-scale projects such as these, as explained by the Liniar fabricator in charge of the project:



"The Liniar system goes through the factory much faster than other systems, so it's more cost effective to manufacture.

It's also much easier to achieve an 'A' rated window, as we have to do less to it than we would with a different system, such as enhanced (and more expensive) glazing.

Our installers also love fitting Liniar as it's been designed to be fitter-friendly – so they're on site for less time overall, which helps with project completion deadlines."

Sean Corcoran, Regional Director at Keepmoat, commented:

"The Leeds PFI is a major scheme for both ourselves and our client.

We are responsible for all designs on the project covering high rise new build and refurbishment, sheltered accommodation, new build housing and the refurbishment of varying types of non-traditional housing.

"Combining the requirements of high standards and tight timescales has meant ensuring our sub-contractors have the resource and technical expertise required.

"The lead-free and energy efficient aspects of the Liniar profile were also important to us in creating a sustainable development for Leeds PFI.

All targets have been achieved to date and we look forward to completing this and other schemes using Liniar profile in the coming years."

For full case study, please visit www.liniar.co.uk/specifiers



“The lead-free and energy efficient aspects of the Liniar profile were also important to us in creating a sustainable development.”

Sean Corcoran
Regional Director, Keepmoat

Case study



Quality homes need quality windows and doors

Kirk Hallam Building Company is one of the longest established house building and development companies in Amber Valley.

When specifying windows and doors for its development of four and five bedroomed executive homes in Heanor, it turned to Linar.

The plots at Starthe View were specified with 'A' rated cream window frames featuring mock sash horns as a decorative finishing touch,

together with argon-filled double-glazed units for thermally efficient performance.

The Linar range was ideal for the development, as its lead-free, multi-chambered profile fitted well with Kirk Hallam's desire for eco-friendly homes - which also featured rainwater harvesting systems, solar hot water heating and high levels of insulation.

Linar French doors were also provided for each property as well as a smart black front door with a cream interior to match the inside of each home, giving the exclusive scheme a personal touch.

Leigh and Jamie Stevenson, directors of Kirk Hallam homes, explained:

"Quality homes need quality windows and doors, so we were careful in our choice of supplier in order to meet this requirement.

"The Linar range delivers the energy efficiency we were looking for, with A rated windows as standard, and we chose cream to give a different look and feel to the usual white PVCu windows on other sites."





“ Linar delivers the energy efficiency we were looking for, and we chose cream to give a different look and feel to standard white ”

Leigh Stevenson
Director, Kirk Hallam Homes

Case study



Cost effective and environmentally friendly

Willmott Dixon is one of the UK's largest privately-owned development and property support companies, winning a Queens Award for Enterprise for sustainable development in 2014.

One recent project involved a 74-bedroomed care home and 11 associated bungalows in Bedworth, Coventry. Originated by Glancy Nicholls Architects on behalf of their client Housing 21, the project specified grey PVCu casement windows for the care home, to match existing aluminium features

and white PVCu for the bungalows, as well as requiring an interface with different materials such as cedar boarding to be jointly designed into the window system.

The main requirements for the windows were:

- Cost effectiveness
- Secured by Design status
- Low U-values
- Overall life cyclic costs.

An open approach combined with a superb site set up by the main contractor made the whole project run smoothly, without the usual site obstacles to contend with.

The project was completed on time and within budget, and looks set to lead to further projects using Liniar profile in the future.

Matt Somers, Principal Surveyor for Willmott Dixon said,

"The Liniar profile met all of the specified requirements.

Throughout the process the fabricator has been a delight to work with, promoting a cost effective and environmentally friendly option for the client which met all their needs."





“The Linar profile met all of the specified requirements... a cost effective and environmentally friendly option for the client”

Matt Somers

Quantity Surveyor, Willmott Dixon

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◀ White casement windows
Stuart Milne Homes

7 **great reasons** to choose Liniar

Innovative – a culture of research and development means exciting new product launches and continuous improvements

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

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

British made – manufactured in a 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 peace of mind

Guaranteed – all Liniar PVCu profiles are guaranteed to not warp, split or discolour for a period of 10 years



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