



alumina  
by Linar

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Your guide to Alumina

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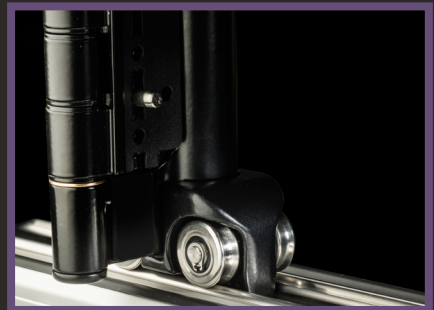
# Introduction

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The Alumina bi-folding door system is a true aluminium bi-fold that offers an exact match to the sculptured Liniar window system as well as a matching foiled finish – with the highest thermal efficiency.

A brand new concept within the industry, Alumina enables consumers to choose energy efficient and cost effective PVCu windows combined with a true aluminium bi-fold door, safe in the knowledge that everything will match. No need for consumers to buy expensive aluminium windows – Alumina opens up new options.

This guide is intended for Liniar fabricators, giving you all the information you need in order to understand the system and the options available – and to help your customers choose Alumina for their aluminium bi-fold needs.



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## Frame colour options

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Like other aluminium bi-folds, Alumina doors are supplied as standard in plain white, black or grey (7016) powder coated finishes.

Doors can also be ordered in a mill finish for custom RAL colour options; please specify the exact colour required when ordering your pre-fabricated door.

Exclusive to Liniar – Alumina bi-folds can also be ordered with a wide range of different coloured precision factory-fitted foils, ensuring a perfect match to Liniar PVCu windows. Please note that where a foiled option is selected, matching beads will be supplied in PVCu unless otherwise stated on the order form. This not only makes them easier to glaze, but helps to increase thermal efficiency.

Aluminium beads will be supplied with all power-coated door sets.



Mill Finish



White RAL Paint (9003)



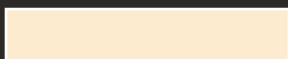
Black RAL Paint (9005)



Grey RAL Paint (7016)



White Foil



Cream Foil



Chartwell Green Foil



Irish Oak Foil



Golden Oak Foil



Rosewood Foil



Mahogany Foil



7016 Grey Foil



Black Brown Foil



## Hardware colour options

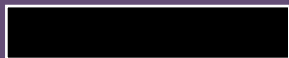
### Handles



White



Gold



Black



Dark Chrome



Chrome

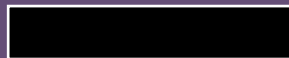
### Hinges and Rollers



White



Gold



Black



Chrome

# Threshold options

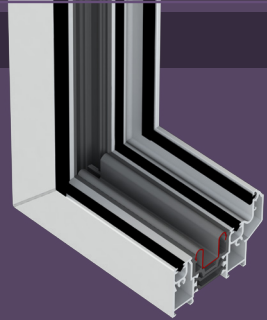
All Alumina bi-folding doors are available with five different threshold options, giving your customers the ultimate in choice, including a wheelchair-friendly Part M compliant low threshold. Please ensure your customer is aware of the benefits and limitations of each of the options, as detailed below and opposite.

If you need assistance with the technical specifications of each of the threshold options, please contact the Design & Development team on 01332 883900.

You can download an A3 PDF wall chart to show the different threshold options to your customers; visit the media centre on the Liniar website or request a printed copy from [marketing@liniar.co.uk](mailto:marketing@liniar.co.uk).

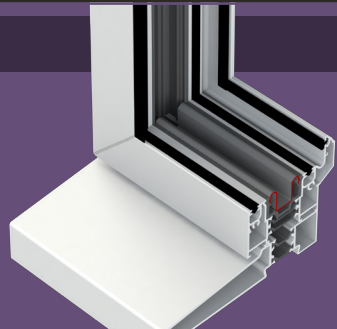
## Frame Only (ABF091)

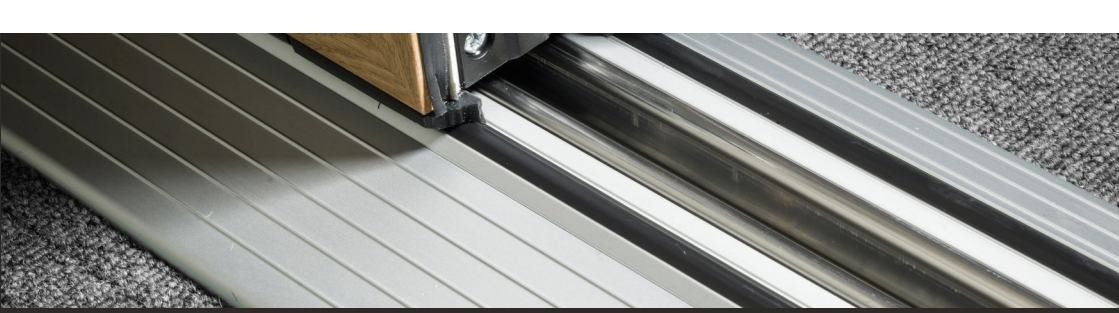
- 62mm
- Supplied as standard unless otherwise specified on order form
- Enables an excellent seal and protects against storm force weather conditions



## Frame and 150mm Cill (ABF091 & ASL150)

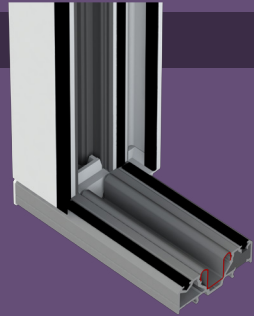
- 65mm
- Offers additional protection in exposed locations
- ??





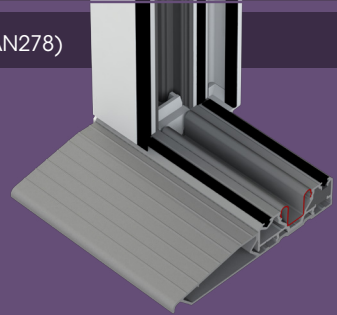
### Low Threshold (MBF291T)

- 23.5mm
- Minimises trip hazards; ideal for general family use.
- Requires no trench excavation so is simple to install.



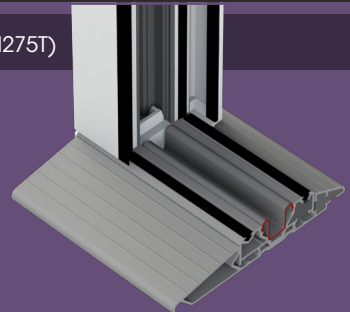
### Low Threshold & Half Ramp (MBF291T & LAN278)

- 26.5mm
- Enables the interior flooring to be fitted flush to the doors
- Requires no trench excavation so is simple to install



### Low Threshold & Full Ramp (MBF291T & LAN275T)

- 26.5mm
- Makes the low threshold Part M compliant for wheelchair access
- Requires no trench excavation so is simple to install



# Accreditations

Alumina bi-folding doors have been subjected to rigorous testing and have been confirmed as satisfying the demanding requirements of PAS:24 and Secured by Design, for your customers' peace of mind.

The innovative, patented thermal polyamide locking mechanism included in every Alumina door helps with thermal efficiency and has been certified by independent third party testing to meet these strict security requirements.



## PAS:24 & Part M

Part Q regulations introduced in 2015 state that all new ground floor dwellings and flats, together with new extensions, must meet strict criteria: "provision must be made to resist unauthorised access to any dwelling".

In essence, doors must be "manufactured to a design that has been shown by test to meet the security requirements of British Standards PAS:24:2012" – so as the Alumina bi-fold has already been accredited with this standard, they are fully Part Q compliant.

## Quality assured

All of Liniar's operations have been assessed by the British Standards Institute and confirmed to meet the exacting requirements of ISO:9001 so you can be assured that your foiled pre-fabricated Alumina doors will be manufactured to the highest standards.

Each set of bi-folds is lovingly hand crafted and checked by a quality testing team before being despatched to you.



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## Mating PVCu products

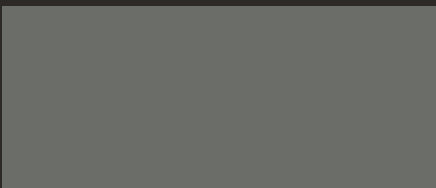
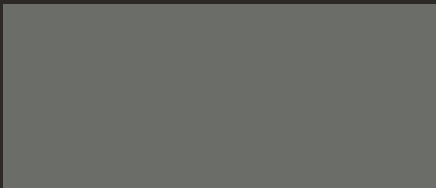
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As previously stated on page 4, all foiled Alumina door sets will be supplied with matching PVCu beads. In addition you can select from Liniar's extensive range of ancillaries including add-ons, head vents and structural joints.

By using foiled PVCu components, you can ensure your stock levels are kept lower as they are common across the window and door range.

In addition, PVCu beads are more flexible than aluminium, making the bi-fold doors faster to glaze and easier for the fitter to handle.

**Mating PVCu components should only be selected when the aluminium product and PVCu products are both fully foiled.**



## Size limitations

The minimum & maximum sash sizes are shown below for the Alumina Bi-Fold door system.

These have been calculated for sashes manufactured to the size limitations and glazed with different glass combinations.

Any doors that are manufactured outside of these limitations will void the Liniar guarantee.

Maximum 6-6-0 outer frame = 6m

Minimum 2-2-0, 4-4-0, 6-6-0 sash size = 700mm

### 4:20:4 Glazed Unit Double Glazing (20kg/m<sup>2</sup>)

Sash Weight (kg)		Sash Width (mm)												
		500	600	700	750	800	850	900	950	1000	1050	1100	1150	1200
Sash Height (mm)	2500	25.0	30.0	35.0	37.5	40.0	42.5	45.0	47.5	50.0	52.5	55.0	57.5	60.0
	2450	24.5	29.4	34.3	36.8	39.2	41.7	44.1	46.6	49.0	51.5	53.9	56.4	58.8
	2400	24.0	28.8	33.6	36.0	38.4	40.8	43.2	45.6	48.0	50.4	52.8	55.2	57.6
	2350	23.5	28.2	32.9	35.3	37.6	40.0	42.3	44.7	47.0	49.4	51.7	54.1	56.4
	2300	23.0	27.6	32.2	34.5	36.8	39.1	41.4	43.7	46.0	48.3	50.6	52.9	55.2
	2250	22.5	27.0	31.5	33.8	36.0	38.3	40.5	42.8	45.0	47.3	49.5	51.8	54.0
	2200	22.0	26.4	30.8	33.0	35.2	37.4	39.6	41.8	44.0	46.2	48.4	50.6	52.8
	2150	21.5	25.8	30.1	32.3	34.4	36.6	38.7	40.9	43.0	45.2	47.3	49.5	51.6
	2100	21.0	25.2	29.4	31.5	33.6	35.7	37.8	39.9	42.0	44.1	46.2	48.3	50.4
	2050	20.5	24.6	28.7	30.8	32.8	34.9	36.9	39.0	41.0	43.1	45.1	47.2	49.2
	2000	20.0	24.0	28.0	30.0	32.0	34.0	36.0	38.0	40.0	42.0	44.0	46.0	48.0
	1950	19.5	23.4	27.3	29.3	31.2	33.2	35.1	37.1	39.0	41.0	42.9	44.9	46.8
	1900	19.0	22.8	26.6	28.5	30.4	32.3	34.2	36.1	38.0	39.9	41.8	43.7	45.6
	1850	18.5	22.2	25.9	27.8	29.6	31.5	33.3	35.2	37.0	38.9	40.7	42.6	44.4



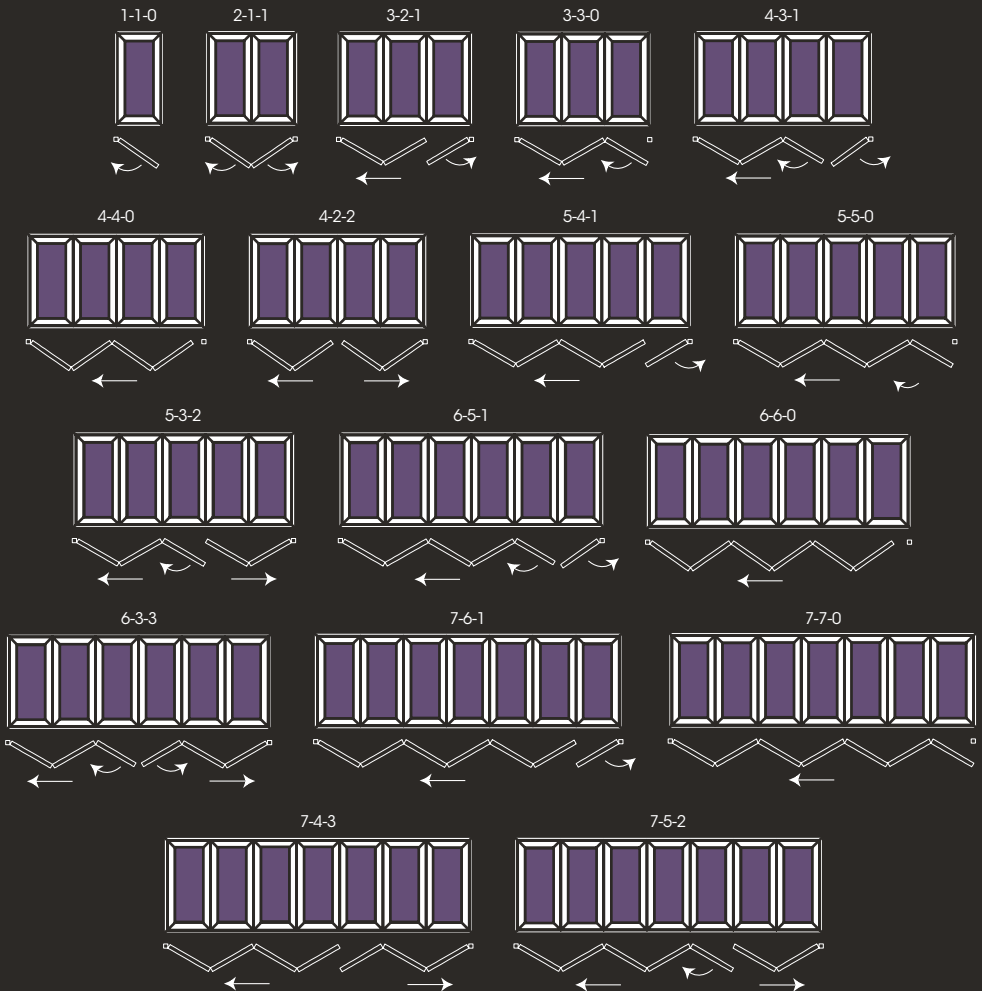
### 6.4-18-4 Glazed Unit Double Glazing (25kg/m<sup>2</sup>)

Sash Weight (kg)		Sash Width (mm)												
		500	600	700	750	800	850	900	950	1000	1050	1100	1150	1200
Sash Height (mm)	2500	31.3	37.5	43.8	46.9	50.0	53.1	56.3	59.4	n/a	n/a	n/a	n/a	n/a
	2450	30.6	36.8	42.9	45.9	49.0	52.1	55.1	58.2	n/a	n/a	n/a	n/a	n/a
	2400	30.0	36.0	42.0	45.0	48.0	51.0	54.0	57.0	60.0	n/a	n/a	n/a	n/a
	2350	29.4	35.3	41.1	44.1	47.0	50.0	52.9	55.8	58.8	n/a	n/a	n/a	n/a
	2300	28.8	34.5	40.3	43.1	46.0	48.9	51.8	54.6	57.5	n/a	n/a	n/a	n/a
	2250	28.1	33.8	39.4	42.2	45.0	47.8	50.6	53.4	56.3	59.0	n/a	n/a	n/a
	2200	27.5	33.0	38.5	41.3	44.0	46.8	49.5	52.3	55.0	57.8	n/a	n/a	n/a
	2150	26.9	32.3	37.6	40.3	43.0	45.7	48.4	51.1	53.8	56.4	59.1	n/a	n/a
	2100	26.3	31.5	36.8	39.4	42.0	44.6	47.3	49.9	52.5	55.1	57.8	n/a	n/a
	2050	25.6	30.8	35.9	38.4	41.0	43.6	46.1	48.7	51.3	53.8	56.4	58.9	n/a
	2000	25.0	30.0	35.0	37.5	40.0	42.5	45.0	47.5	50.0	52.5	55.0	57.5	60.0
	1950	24.4	29.3	34.1	36.6	39.0	41.4	43.9	46.3	48.8	51.2	53.6	56.1	58.5
	1900	23.8	28.5	33.3	35.6	38.0	40.4	42.8	45.1	47.5	49.9	52.3	54.6	57.0
	1850	23.1	27.8	32.4	34.7	37.0	39.3	41.6	43.9	46.3	48.6	50.9	53.2	55.5

# Door styles

The Alumina bi-folding door range has a wide variety of options when it comes to sizes and opening configurations - available from 2 panes wide up to 7 panes. Our door pane numbering works like this:

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



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## Exposed weather performance

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Elevated or exposed installations

Liniar recommend:

- Open out configurations
- Rebated frame threshold (ABF091)
- Enhanced gasket configurations (as pictured)

By using this combination, any water ingress and heat loss should be minimised. Please contact the Design & Development team at Liniar for further information if required.

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## Thermal performance

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Alumina bi-folds can achieve a U-value as low as 1.2 W/m<sup>2</sup>K with triple glazing.

If a low U-value is not essential, other combinations of glazing can be used – please see table below for an indication of the U-values achievable with different options.











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## USPs

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- It can be foiled to match their Liniar PVCu windows (any powder coated colour is also available);
- It features the exact same sculptured profile as their Liniar PVCu windows;
- It's more thermally efficient than other aluminium bi-folds, thanks to its innovative thermal lock;
- It can be double glazed (1.4 U-value) or triple glazed (1.2 U-value);
- It has the same beautiful, smooth aesthetics as the Liniar ModLok™ bi-fold and the same attention to detail with folding keys, hidden hinge fixings and discreet magnets;
- It can span openings up to 6.5m wide with sashes up to 2.5m high;
- Alumina doors are fully tested for Secured by Design and accredited to PAS24 standards;
- You can offer a single point of guarantee for a full Liniar installation;
- It's easier for installers to bead after glazing when foiled, as beads are supplied in flexible PVCu.

# Marketing support

In order to help you to sell the Alumina door to your customers, Linar has provided a full set of marketing tools for you to use.

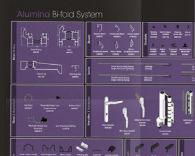
All the literature can be downloaded from the media centre on the Linar website, or ordered using the codes where specified on your usual sales order.



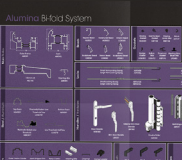
Consumer Brochure  
TMBRO0030



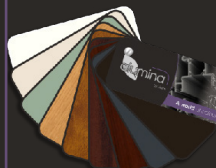
Fact Sheet  
FOC



Thresh. Wall Chart  
FOC



Wall Chart  
B00778



Switch Booklet  
TMMIS0010



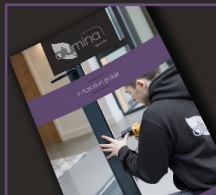
Consumer Brochure  
TMBRO0030



Operations Flyer  
TBC



Sample Box  
TMSB0010



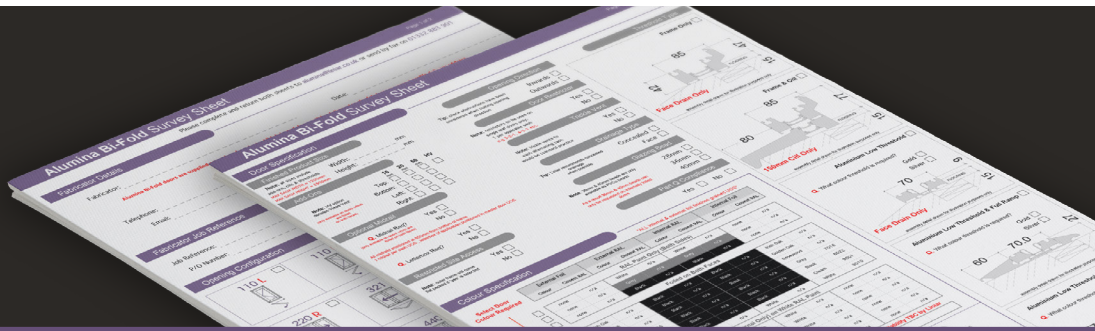
Installation Guide  
TBC



Installation Video  
Media Centre



Sales Video  
Media Centre



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## Quotes

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To get a quotation for an Alumina bi-fold door, you'll need to complete the Alumina survey form, which can be downloaded from [www.alumina.liniar.co.uk/surveyform](http://www.alumina.liniar.co.uk/surveyform).

Please email your completed form to [alumina@liniar.co.uk](mailto:alumina@liniar.co.uk).

Please note that no quotation can be supplied without all fields being completed accurately, as each bi-fold will be made to order. We cannot process a quotation without this form.

Once your form has been received, you will be sent a confirmation email from Liniar, advising to which Alumina fabricator the request has been allocated.

Your accurate quotation will be sent to you by email from the allocated Alumina fabricator within two working days, at which point you can add your margin and get back to your customer.

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## Place an order

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If you wish to accept the quotation and order an Alumina bi-fold, please get back in touch with the Alumina fabricator that sent you the quotation.

Alumina by Liniar  
Flamstead House  
Denby Hall Business Park  
Denby  
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