

A man with a beard, wearing a white t-shirt and blue gloves, is shown from the side, working on a window frame. He is reaching up with his right hand to adjust or install a component of the window. The window has dark frames and is set in a building with visible wooden beams and plastered walls. The background is slightly blurred, focusing attention on the man and his work.

CREATING BRIGHT FUTURES

Doc L Guide for Installers

ALUK[®]

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Introduction to the **Future Homes Standard**

The UK was the first major world economy to pass a net zero emissions target into law. This target which was recommended by the committee on Climate Change, is one of the most ambitious in the world and requires the UK to bring all greenhouse gas emissions to net zero by 2050.

In 2018, heating and powering homes accounted for 22% of all greenhouse gas emissions in the UK. The UK has already made considerable progress in this sector by reducing total emissions by 43% since 1990, despite there being approximately 25% more homes. The homes that are constructed now and in the next decade will still exist in 2050, and the Government acknowledged that more must be done to reduce the carbon impact of all buildings.

The Government has made a commitment that by 2025 they will introduce a Future Homes Standard (FHS) for new build homes to be future-proofed with low carbon heating and world-leading levels of energy-efficiency. This target will deliver new homes that are net zero carbon ready by 2025.

In December 2021, the Government took the first step of the Future Homes Standard by unveiling new Building Regulations. The second stage will take place in January 2025.

New Building Regulations

Approved Document L –
Conservation of Fuel and Power

The updated Approved Documents L1 and L2 for
England were released in December 2021.

The new documents have combined four
previously separate documents into just two:

L1 – Dwellings

L2 – Buildings other than dwellings



How do **aluminium fabricators** and installers comply?

Compliance for windows and doors can be achieved using U-Values and Window/Door Energy Ratings.

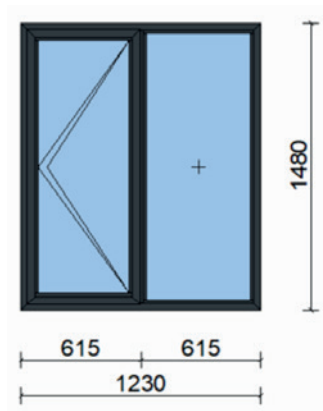
U-Values:

The U-Value of a window or door is a measurement of the thermal transmittance of the whole window or door assembly. It measures how well a building transfers heat.

The U-Value measure is given in W/m^2K and is identified by a numerical value such as $1.4W/m^2K$. The lower the U-Value the more efficient the product.

The U-Value is calculated in accordance with BS EN ISO 10077-1.

The benefit of using U-Value compliance is that it can be used as a compliance method in all parts of the building regulation – for both new and existing dwellings.



Window / Door Energy Ratings

The image shows a BFRC Energy Window label for a PVC-U Casement Window. The label features a color-coded energy scale from A+++ (purple) to E (orange). The window is rated A++, indicated by a purple bar at the top. Below the scale is a table with technical specifications and a 'Proof' logo.

Company Logo Ltd
PVC-U Casement Window
A Rated Windows

Energy Index (kWh/m²/year)
20

For climate zones in UK & Ireland

Thermal Transmittance (U window)	0.00 W/m ² .K
Solar Factor (g window)	0.00
Effective Air Leakage (L factor)	0.00 W/m ³ .K

Proof Licence No. 123456
Review Date: 01/05/2019
To verify this licence please visit bfrc.org

The label is a voluntary requirement. This voluntary label provided as a customer service to allow consumers to make informed decisions on the energy performance of competing products.
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WER/DSERs is a rating system that is based upon a scale of E to A++, A++ being the most energy efficient.

This scheme is similar to the household appliance scheme that you see on white goods like fridges.

WER/DSERs can be used as a compliance method, but only for Existing Dwellings and 'domestic type windows' on Other Buildings.

NEW Approved Document L: Conservation of Fuel and Power

Building Regulations were last updated in 2016. The 2022 update aims to reduce carbon emissions from new homes by 30% and by 27% for other types of building.

		 L1		 L1		 L2		 L2	
		New Build Dwellings		Existing Dwellings		New Buildings other than Dwellings		Existing Buildings other than Dwellings	
		Notional	Limiting	Limiting		Limiting		Limiting	
Windows	2016	1.4	2.0	1.6 or WER 'C'		2.2		1.6 or WER 'C'	
	2022	1.2	1.6	1.4 or WER 'B'		1.6 or WER 'B'*		1.6 or WER 'B'*	
Doors	2016	1.4	2.0	1.8 or WER 'E'		2.2		1.8	
	2022	1.2	1.6	1.4 or DSER 'C'		1.6		1.6	

What's the difference between Notional and Limiting values?

Notional and limiting values are aimed at offering flexibility in the design and development of a building. Allowing different elements to vary in performance as long as the overall targets are met and the limiting values are not exceeded. When establishing the building fabric performance, designers are advised to start the process with each building element value set to the notional value and not the limiting value.

All AluK products developed for use in the New Build Dwellings market have been designed around the notional value to ensure the building fabric complies with performance requirements within the updated approved document.



How do **AluK products** comply?

As a systems house, we have no choice but to comply with the new lower U-Values. We support the aim to reduce our carbon footprint in the UK and want to play our part by ensuring our windows and doors meet the new Notional values.

It's also important to us that we support our fabricators and you, the installer, by ensuring we meet these lower U-Values with the same products and using double glazing.

Why is this important?

1. The glazing market is not geared up to provide triple-glazing in volume.
2. The cost of triple glazing is not competitive.
3. Many fabricators are not able to manufacture triple glazed systems at volume.
4. The weight of triple glazing makes it more difficult to handle and install, whilst putting more pressure on hinges and hardware.

How have we **changed** our products?

Our route to meet the new regulations and support our customers has meant engineering many improvements to the internal design without changing the appearance of our systems.

Using new thermal break designs and foams, and new gaskets, our well-loved products have been modified to comfortably meet the new regulations for new build and existing dwellings.



Why Should I Comply?

The policing of the changes will be regulated by the local authority Building Control Bodies. It has been suggested that Building Control will manage the policing by:

- Employing additional resource. It has been implied that circa 1,100 new Control Officers will be employed
- Larger fabricators will be initially targeted
- Postcode areas will be selected at random and heavily monitored

Failure to comply may result in:

- Prosecution in a Magistrate's Court where an unlimited fine may be imposed. This action is usually taken against the person carrying out the work (builder, installer or main contractor)
- Alternatively, or in addition, the local authority may serve an enforcement notice on the building owner requiring the alterations or removal of the works. If the owner does not comply with the notice the local authority has the power to undertake the work itself and recover the costs from the owner.

Where does installation sit within Approved Doc L?

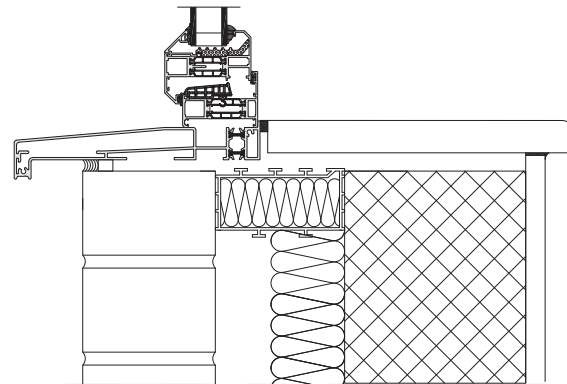
Windows and doors installed into a New Build are required to be sealed with air sealing tape around the structural openings. Compressible seals or gun sealant may be used to supplement taping. Photographic evidence may be required for sign off.

Installation tolerances are to be in accordance with BS 8213-4 – Windows and Doors – Part 4: Code of practice for the survey and installation of windows and external doorsets.

Windows or Doors should be located with an overlap between the inner face of the unit and the inner face of the external leaf – for windows an overlap between 30-50mm and for doors 50mm –

so that the window or door unit is contiguous with the insulation layer of the external wall.

Fully insulated and continuous cavity closer should be used, installed tight to the insulation and cavity apertures. For door units, install perimeter insulation within the threshold zone or use reinforced cavity closer.

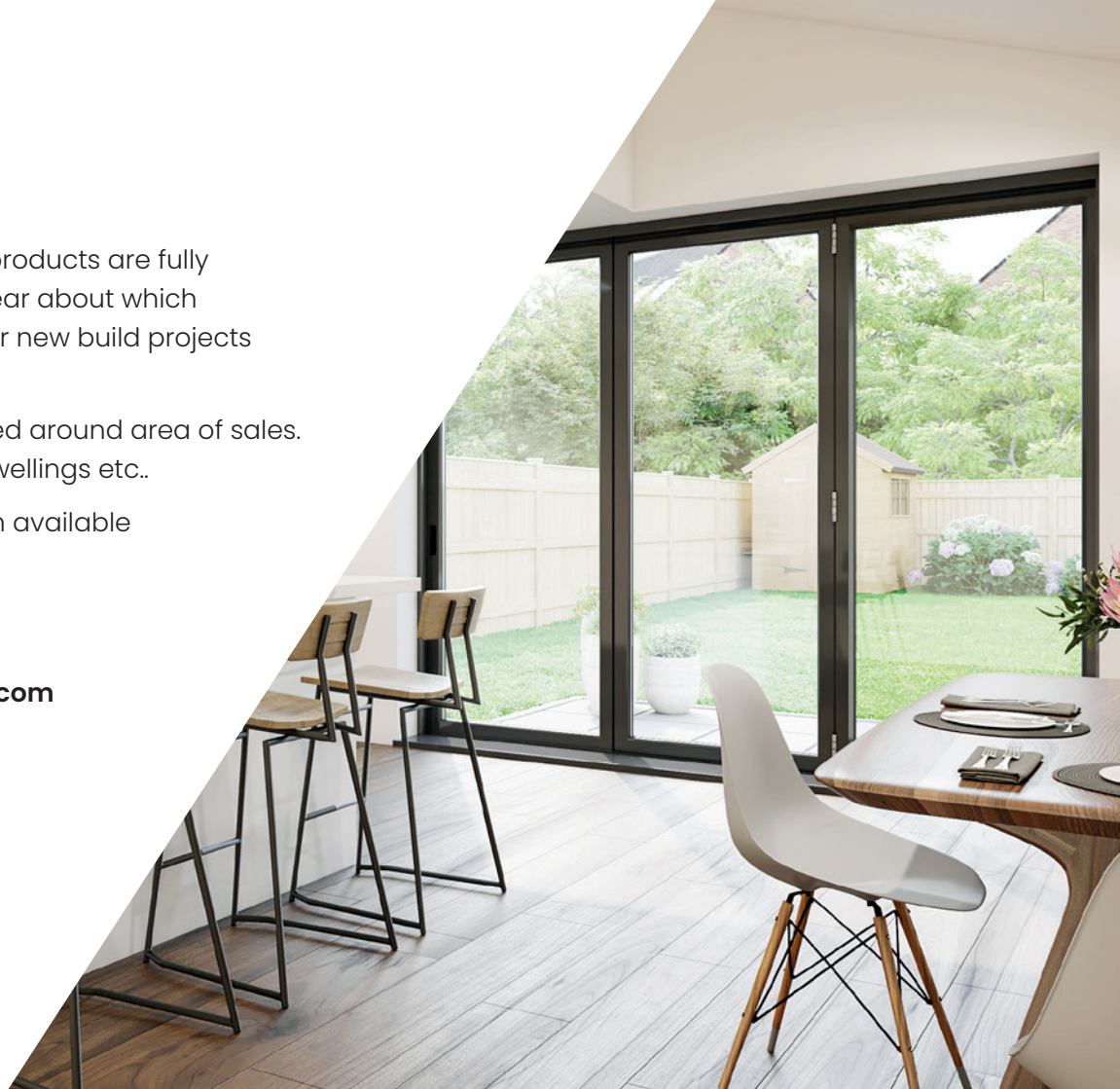


Summary

- Rest assured that AluK products are fully compliant and we're clear about which products are suitable for new build projects and existing home.
- Products designed based around area of sales. Eg. New Build, Existing Dwellings etc..
- Technical Services team available via your fabricator

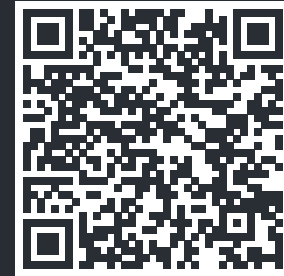
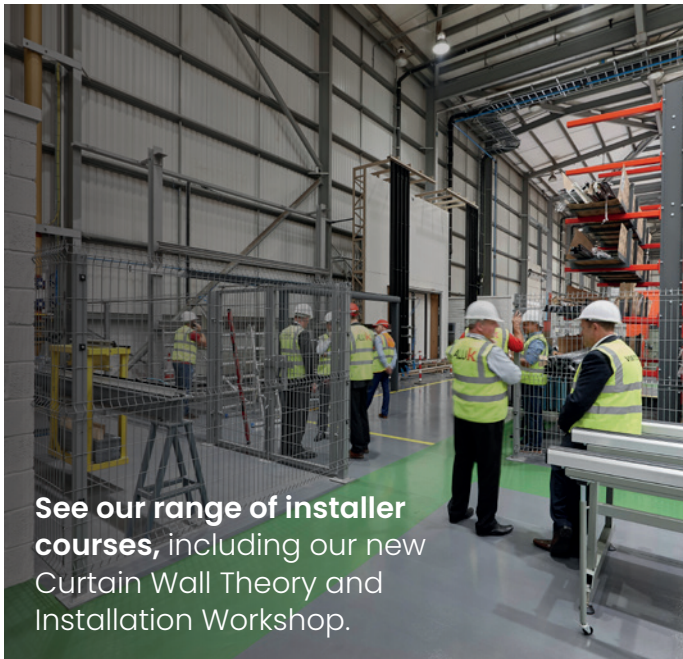
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AluK Training Academy

Did you know that AluK has a fully-accredited training academy in-house that offers FREE training to both fabricators and installers?



Find out more or book
your free place at:
www.alukacademy.co.uk

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