BUILDING REGULATIONS (ENGLAND)

APPROVED DOCUMENTS L & F



THE SMART ALUMINIUM RANGE.

INSTALL WITH CONFIDENCE.



In the shift towards a Future Buildings Standard, the government has introduced a range of changes to the Building Regulations, including a mandatory 30 per cent cut in carbon for all new homes and a 27 per cent cut for other buildings, including offices and shops†.

With the impact of climate change and the increase in urbanisation, we now not only need to ensure the homes of the UK are warm, energy efficient and provide exceptional thermal performance, but that they are also well ventilated for cleaner, cooler air.

Changes to Part L and Part F of the Building Regulations in England are being introduced on the 15th June 2022, to ensure all new and renovation projects are on-spec for thermal efficiency, energy efficiency and ventilation capability.

†Source: RIBA J. ribaj.com / January 2022

WHAT THIS MEANS TO YOU, THE INSTALLER.

The information we have provided within this document will help you understand what is required to be compliant with the new Regulations.

Approved Document L and Approved Document F will outline the criteria required for domestic, non-domestic, new-build and renovation project buildings. Part L focuses on the energy efficiency levels and the thermal performance of the building, set to reduce the impact on fuel usage, whilst Part F focuses on the ventilation performance, which can be as simple as how many windows can open within a property, to minimising the ingress of external pollutants and the proper installation of ventilation systems. Therefore, when installing windows and doors, you will need to ensure they are approved to the new specifications.

Our products and systems are obviously key to the compliance of these new Regulations, so if you have any queries regarding design, our products, or even the Regulations themselves, our Customer Services, Sales or Technical Teams are always here to help and support you.



WHAT WE'VE DONE TO MEET THE NEW REGULATIONS.

CONSERVING ENERGY (PART L)

At REAL, we are proud to be a responsible manufacturer. That means we take changes in Regulations seriously – to ensure we're compliant, you're compliant and your customers enjoy products that meet the current standards. Our aluminium profiles are manufactured using the highest quality materials but it's important to understand how glazing can make a significant difference to how the completed window performs.

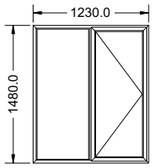
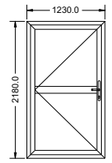
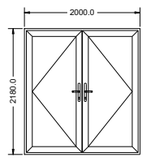
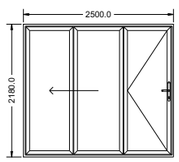
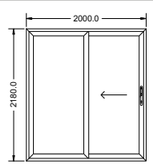
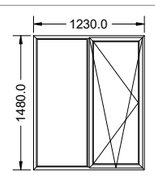
It's also worth noting that the new Part L Regulations for New Build properties focus on 'U' values, whilst Renovation Properties will be assessed on Energy Ratings or 'U' Values.

Our completed windows have achieved an 'A' Rating and 'U' Values that meet the standards. We have created the following tables to help you identify what's required to ensure your completed product is compliant.



APPROVED DOCUMENT L RENOVATION

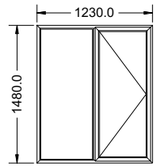
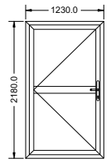
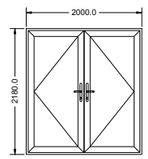
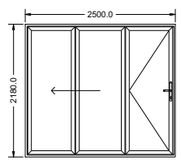
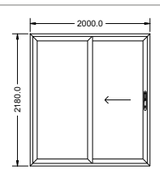
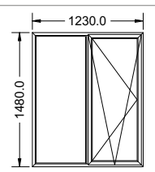
REPLACEMENT ON EXISTING DWELLINGS OR EXTENSIONS (Energy ratings)

REQUIREMENT	WINDOW / DOOR DESIGN	SYSTEM	DOUBLE GLAZED UNIT SPEC	ACTUAL RATING	
B rated or Uw 1.4 W/m²k		Alitherm 300 Window System 1 (F)	28mm unit clear/argon/softcoat 1.2 Centre pane 1.22 W/m²k warm edge spacer	B	Band A achievable with low iron glass + FF insulation
		Alitherm 300 Window System 2 & 5 (F)	28mm unit clear/argon/softcoat 1.2 Centre pane 1.22 W/m²k warm edge spacer	B	
		NEW PRODUCT Alitherm 400 Window (F)	28mm unit clear/argon/softcoat 1.2 Centre pane 1.22 W/m²k warm edge spacer	A*	
>60% glazed door C rated or Ud 1.4 W/m²k		**NEW PRODUCT** Alitherm 400 Resi Door (F)	28mm unit clear/argon/softcoat 1.2 Centre pane 1.22 W/m²k warm edge spacer	C	
C rated or Ud 1.4 W/m²k		**NEW PRODUCT** Alitherm 400 French Door (F)	28mm unit clear/argon/softcoat 1.2 Centre pane 1.22 W/m²k warm edge spacer	C	Band B achievable with low iron glass
C rated or Ud 1.4 W/m²k		Visofold 1000 SLIM Bi-fold door	28mm unit clear/argon/softcoat 1.2 Centre pane 1.22 W/m²k warm edge spacer	C	Band B achievable with low iron glass
C rated or Ud 1.4 W/m²k		Visoglide Plus Sliding Door	28mm unit clear/argon/softcoat 1.2 Centre pane 1.22 W/m²k warm edge spacer	C	Band B achievable with low iron glass + F insulation
B rated or Uw 1.4 W/m²k		Ecofutural TBT	28mm unit clear/argon/softcoat 1.2 Centre pane 1.22 W/m²k warm edge spacer	B	

Glass type 1.2 -examples K glass S, Planitherm Total, Climaguard A+

* Internally glazed Alitherm 400 windows need low iron glass to achieve an A rating.

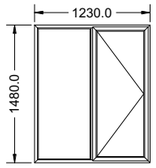
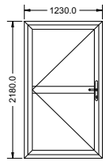
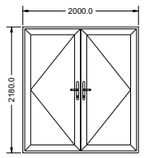
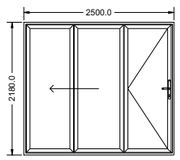
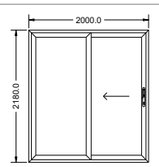
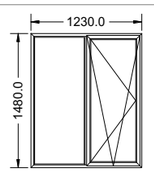
EXTENSIONS U VALUES (Limiting U value 1.4 W/m²k)

REQUIREMENT	WINDOW / DOOR DESIGN	SYSTEM	GLAZED UNIT SPEC	ACTUAL UW/UD
B rated or Uw 1.4W/m²k		Alitherm 300 Window System 1 (F)	Triple glazed 36mm unit clear/softcoat 1.2/softcoat 1.2 Centre pane 0.8 W/m²k warm edge spacer	1.3 W/m²K
		Alitherm 300 Window System 2 & 5 (F)	Triple glazed 36mm unit clear/softcoat 1.2/softcoat 1.2 Centre pane 0.8 W/m²k warm edge spacer	1.3 W/m²K
		NEW PRODUCT Alitherm 400 Window (F)	Double glazed 28mm unit clear/argon/softcoat 1 Centre pane 1.068 W/m²k warm edge spacer	1.4 W/m²K
>60% glazed door C rated or Ud 1.4W/m²k		**NEW PRODUCT** Alitherm 400 Resi Door (F)	Double glazed 28mm unit clear/argon/softcoat 1 Centre pane 1.068W/m²k warm edge spacer	1.4 W/m²K
C rated or Ud 1.4W/m²k		**NEW PRODUCT** Alitherm 400 French Door (F)	Double glazed 28mm unit clear/argon/softcoat 1 Centre pane 1.07W/m²k warm edge spacer	1.4 W/m²K
C rated or Ud 1.4W/m²k		Visofold 1000 SLIM Bi-fold door	Triple glazed 44mm unit clear/softcoat 1.2/softcoat 1.2 Centre pane 0.7 W/m²k warm edge spacer	1.3 W/m²K
C rated or Ud 1.4W/m²k		Visoglide Plus Sliding Door (F)	Triple glazed 36mm unit clear/softcoat 1.2/softcoat 1.2 Centre pane 0.76 W/m²k warm edge spacer	1.3 W/m²K
B rated or Uw 1.4W/m²k		Ecofutural TBT	Double glazed 28mm unit clear/argon/softcoat 1 Centre pane 1.068W/m²k warm edge spacer	1.4 W/m²K

Glass type 1.2 -examples K glass S, Planitherm Total, Climaguard A+, Glass type 1 -examples Pilkington S1, Planitherm one, Climaguard 1

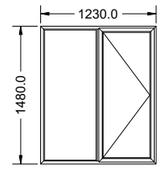
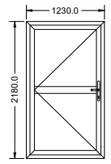
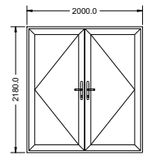
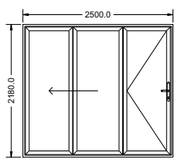
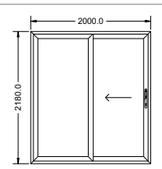
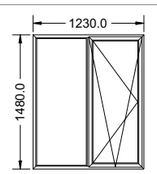
APPROVED DOCUMENT L NEW BUILD

NEW BUILD U VALUES WITH DOUBLE GLAZING (Limiting U value 1.6 W/m²k)

REQUIREMENT	WINDOW / DOOR DESIGN	SYSTEM	DOUBLE GLAZED UNIT SPEC	ACTUAL UW/UD
Uw 1.6 W/m²k minimum Uw 1.2 W/m²k Target		Alitherm 300 Window System 1 (FF)	28mm clear/argon/softcoat 1 Centre pane 1.068 W/m²k warm edge spacer	1.6 W/m²K
		Alitherm 300 Window System 2 & 5 (FF)	28mm clear/argon/softcoat 1 Centre pane 1.068 W/m²k warm edge spacer	1.5 W/m²K
		NEW PRODUCT Alitherm 400 Window (F)	28mm unit clear/argon/softcoat 1 Centre pane 1.068 W/m²k warm edge spacer	1.4 W/m²K
>60% glazed door Ud 1.6 W/m²k minimum Ud 1.2 W/m²k Target		**NEW PRODUCT** Alitherm 400 Resi Door (F)	28mm clear/argon/softcoat 1 Centre pane 1.068 W/m²k warm edge spacer	1.4 W/m²K
Ud 1.6 W/m²k minimum Ud 1.2 W/m²k Target		**NEW PRODUCT** Alitherm 400 French Door (F)	28mm clear/argon/softcoat 1 Centre pane 1.068 W/m²k warm edge spacer	1.4 W/m²K
Ud 1.6 W/m2k minimum Ud 1.2 W/m2k Target		Visofold 1000 SLIM Bi-fold door	28mm clear/argon/softcoat 1 Centre pane 1.068 W/m²k warm edge spacer	1.6 W/m²K
Ud 1.6 W/m2k minimum Ud 1.2 W/m2k Target		Visoglide Plus Sliding Door (F)	28mm clear/argon/softcoat 1 Centre pane 1.068 W/m²k warm edge spacer	1.6 W/m²K
Uw 1.6 W/m²k minimum Uw 1.2 W/m²k Target		Ecofutural TBT	28mm clear/argon/softcoat 1 Centre pane 1.068 W/m²k warm edge spacer	1.4 W/m²K

Glass type 1 -examples Pilkington S1, Planitherm One, Climaguard 1

NEW BUILD U VALUES WITH TRIPLE GLAZING NOTIONAL METHOD (Target U value 1.2 W/m²k)

REQUIREMENT	WINDOW / DOOR DESIGN	SYSTEM	TRIPLE GLAZED UNIT SPEC	ACTUAL UW/UD
Uw 1.6 W/m²k minimum Uw 1.2 W/m²k Target		Alitherm 300 Window System 1 (FF)	36mm unit clear/softcoat 1/softcoat 1 Centre pane 0.7 W/m²k warm edge spacer	1.2 W/m²K
		Alitherm 300 Window System 2 & 5 (FF)	36mm unit clear/softcoat 1/softcoat 1 Centre pane 0.7 W/m²k warm edge spacer	1.2 W/m²K
		NEW PRODUCT Alitherm 400	40mm unit clear/softcoat 1/softcoat 1 Centre pane 0.63 W/m²k warm edge spacer	1.1 W/m²K
>60% glazed door Ud 1.6 W/m²k minimum Ud 1.2 W/m²k Target		**NEW PRODUCT** Alitherm 400 Resi Door (F)	40mm unit clear/softcoat 1/softcoat 1 Centre pane 0.63 W/m²k warm edge spacer	1.1 W/m²K
Ud 1.6 W/m²k minimum Ud 1.2 W/m²k Target		**NEW PRODUCT** Alitherm 400 French Door (F)	40mm unit clear/softcoat 1/softcoat 1 Centre pane 0.63 W/m²k warm edge spacer	1.1 W/m²K
Ud 1.6 W/m²k minimum Ud 1.2 W/m²k Target		Visofold 1000 SLIM Bi-fold door **NEW BEAD**	44mm unit clear/softcoat 1/softcoat 1 Centre pane 0.6 W/m²k warm edge spacer	1.2 W/m²K
Ud 1.6 W/m²k minimum Ud 1.2 W/m²k Target		Visoglide Plus Sliding Door (F)	36mm unit clear/softcoat 1/softcoat 1 Centre pane 0.72 W/m²k warm edge spacer	1.3 W/m²K
Uw 1.6 W/m²k minimum Uw 1.2 W/m²k Target		Ecofutural TBT	36mm unit clear/softcoat 1/softcoat 1 Centre pane 0.67 W/m²k warm edge spacer	1.1 W/m²K

Glass type 1 -examples Pilkington S1, Planitherm One, Climaguard 1
+Note: Triple glazing reduces light transmission to the inside



AD L: ENERGY EFFICIENCY - NEW DWELLINGS

The Notional dwelling Target 'U' Values for Windows and Doors are laid out in Table 1.1 of the Approved Document L.

The notional method enables Architects to trade off 'U' values against other materials in the dwelling as long as they are within the limiting 'U' values.

Table 1.1 from Doc L

DESCRIPTION	TARGET 'U' VALUE
Windows	1.2 W/m²K
Doors with glazed are a greater than 60%	1.2 W/m²K
Other doors	1.0 W/m²K

The lowest specification 'U' Value allowable referred to as the Limiting 'U' Values are shown in Table 4.1.

Table 4.1 from Doc L

DESCRIPTION	LIMITING 'U' VALUE
Windows	1.6 W/m²K
Doors	1.6 W/m²K



AD L: ENERGY EFFICIENCY - EXISTING DWELLINGS

3.2 'U' Values, Window Energy Ratings (WER) and doorset energy ratings (DSER) of replacement windows and doors must be both:

- No worse than that of the element being replaced
- Meet the limiting standards in Table 4.2 (Lowest specification of 'U' Value or WER/DSER allowable)

Table 4.2 from Doc L

DESCRIPTION	'U' VALUE	WER/DSER
Windows	1.4 W/m²K	B
Doors with glazed area greater than 60%	1.4 W/m²K	C
Other doors	1.4 W/m²K	B

'U' Values, Any windows and doors replaced will need to be at least the level of performance detailed in Table 4.2 above.

FRESHER, CLEANER INDOOR AIR (PART F)

The new Simon TTF Slimline is a through-frame trickle ventilator that is a robust, yet attractive aluminium ventilator. With its built-in updraught and various operating modes the TTF Slimline is a stylish and effective product that perfectly complements our beautiful REAL profiles.



SIMON TTF SLIMLINE

- Independently tested to BS EN 13141-1:2019
- Water tightness of 400pa
- Independently acoustically tested in accordance with BS EN 20140-10:1992, ISO 140-10:1991.
- Tested in accordance with BS EN 1026:2016 & BS EN 1027: 2016 Weather performance

AD F: VENTILATION - NEW DWELLINGS

Table 1.7 from Doc F

ROOM TYPE	MINIMUM EQUIVALENT AREA OF BACKGROUND VENTILATORS FOR DWELLINGS WITH MULTIPLE FLOORS	MINIMUM EQUIVALENT AREA OF BACKGROUND VENTILATORS FOR SINGLE STORY DWELLINGS
Habitable Room (see note 2 & 3)	8,000mm²	10,000mm²
Kitchen (see note 2 & 3)	8,000mm²	10,000mm²
Utility Room	NO MINIMUM	NO MINIMUM
Bathroom (see note 4)	4,000mm²	4,000mm²
Sanitary Accommodation	NO MINIMUM	NO MINIMUM

The use of this table is not appropriate in the following situations or conditions and expert advice must be sought.

1a) If the dwelling has only one exposed facade (e.g. within a multi-storey building).

1b) If the dwelling has 70% of its openings on the same facade.

1c) If a kitchen has no windows or external facade where a ventilator could be installed.

2) Where a kitchen and living room accommodation are not separate rooms (i.e. open plan), no fewer than three ventilators of the same equivalent area as for other habitable rooms should be provided within the open plan space (8,000mm²).

3) The total number of ventilators installed in the dwelling's habitable rooms and kitchen/s should be no fewer than five, except in one bedroom properties where there should be no fewer than four.

4) If a bathroom has no window or external facade through which a ventilator can be installed, the minimum equivalent area specified should be added to the ventilator sizes specified in nearest adjoining rooms. (i.e. 8,000mm² increased to 12,000mm² and 10,000mm² increased to 14,000mm²).

AD F: VENTILATION - REPLACEMENT WINDOWS

If the existing windows have background ventilators, the replacement windows should have background ventilators that are:-

i) No smaller than the background ventilators in the original windows.

ii) Be controllable either automatically or by the occupant.

If the existing windows do not have background ventilators and there is no mechanical ventilation with a heat recovery system, it is necessary to ensure that the ventilation provision in the dwelling is no worse than it was before the work was carried out.

This may be demonstrated in any of the following ways:-

i) Incorporating background ventilators in the replacement windows equivalent to column one in the above table 1.7.

ii) If there is a continuous mechanical extract ventilation, replacement windows in habitable rooms which are not wet rooms must have a minimum background ventilation area of 4,000mm².

iii) Other ventilation provisions, if it can be demonstrated to a building control body that they comply.

Note: If it is not technically feasible to adopt the minimum equivalent areas set out in the above table 1.7, the background ventilators should have equivalent areas as close to the minimum value as is feasible.

For full clarity and guidance on New Part L and Part F regulations, please visit www.gov.uk



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REAL
ALUMINIUM

Part of the Customade Group

V1 - May 2022