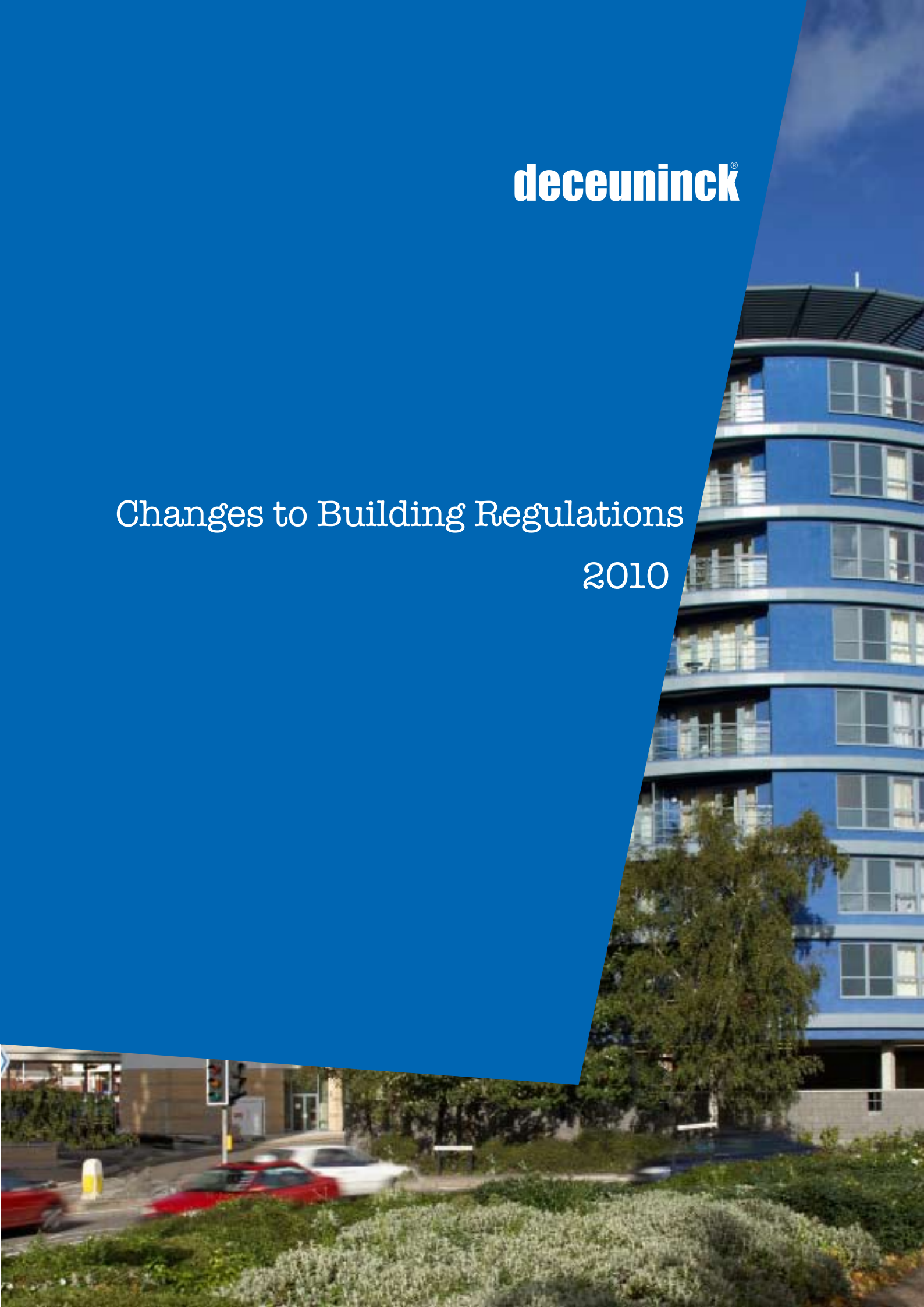


deceuninck[®]

Changes to Building Regulations
2010





2500, 2800 and 3000 Zendow
Window Systems are easily able to
satisfy the new requirements

The revised Approved Documents of Part L (Conservation of Fuel and Power) and Part F (Ventilation) of the Building Regulations for England and Wales have now been published, with an expected implementation date of 1st October 2010.

In addition the updated Building Standards Technical Handbooks have been published by Scottish Government with a similar implementation date of 1st October 2010.

In all documents concerned with the thermal performance of windows and doors, the requirements have been tightened, particularly for replacements. Contrary to much of the information you may have seen or heard, Window Energy Ratings (WER's) will not be the only form of compliance, indeed whole element U-Values will continue to be a viable alternative as we have at present with only greater restrictions being placed on the centre pane U-values of the 3 methods of compliance that we currently have. The good news for all Deceuninck customers is that our 2500, 2800 and 3000 Zendow Window Systems are easily able to satisfy the new requirements, albeit with a higher specification of Insulated Glass Unit.

This document is intended to give customers an overview of how impending changes in legislation are likely to affect their businesses, however a short fact sheet of this type can only cover the headline issues. Deceuninck would encourage customers to read all relevant documentation and familiarise themselves with it, all of which can be located and read or downloaded from the internet free of charge.

For England and Wales Approved Documents visit :- <http://www.planningportal.gov.uk/england/professionals/buildingregs/technicalguidance/bcapproveddocumentslist/>

And for Scotland, the Technical Handbooks can be found at :- <http://www.scotland.gov.uk/Topics/Built-Environment/Building/Building-standards/publications/pubtech>



As with 2006, Document L for England and Wales is split into 4 parts, whilst thermal requirements for Scotland can be found in Section 6.

England and Wales Existing Dwellings- Approved Document L1B

This is the document that covers domestic replacements and therefore will affect most window fabricators for a majority of the windows/doors that they supply or install. The requirements are summarised as follows:-

Windows*

Window Energy Rating minimum Band C
Whole element U-Value 1.6Wm²k or better

Doors*

Whole element U-Value 1.8Wm²k or better

Conservatories

Exemption for sizes of less than 30m² remains providing they are at ground level, thermal separation between the existing building remains and the heating system is separate from main dwelling.

Extensions

No separate requirements for performance but sizes should not exceed 25% of floor area. Also a cautionary note that windows of less than 20% floor area can provide inadequate levels of daylight leading to additional use of artificial light.

* Refer to latest Deceuninck published Thermal Calculations-Terms and Conditions for services and policy.

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A Window Energy Rating
Declaration needs to
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Additional considerations :-

- SAP 2009, Table 6e can be used in the absence of calculated values. (Note all indicative values for 1.6Wm²k or below are triple glazed in Table 6e).
- U-Values to be calculated* using methods set out in BR 443 for:-
 - Smaller of 2 standard windows set out in BS EN 14351-1 (1230mx1480mm, single opener)
 - The standard window configuration set out in BR 443 (1230mx1480mm, opener next to fixed with central mullion)
 - The actual window size and style.
- A Window Energy Rating Declaration needs to provide a quality assured process/audit trail.
- Insulated cavity closers should be installed where appropriate.
- Where a window is enlarged or new one created, the area should not exceed 25% of total floor area.



Existing Buildings Other Than Dwellings-Approved Document L2B

The standards for replacement windows/doors in non-dwellings are as follows:-

Windows

Whole element U-Value 1.8Wm²k or better
Window Energy Rating minimum Band C (windows domestic in character only)

Doors

Whole element U-Value 1.8Wm²k or better (>50% glazed area)
High usage entrance doors, 3.5Wm²k

Conservatories

Exempt if heating system is separate from main dwelling and thermal separation between the existing building remains.

Extensions

No separate requirements for performance but sizes should not exceed the following area of exposed wall:-

- 30% for residential buildings where people temporarily or permanently reside.
- 40% for places of assembly, offices and shops.
- 15% for industrial and storage buildings.
- A centre pane U-Value of 1.2 Wm²k can be used to maintain the character and existing façade of a building where the above cannot be met.
- WER schemes and U-Value calculations as per document L1B.
- If a case can be made, buildings that may be subject to high internal gains can have their area weighted U-Values relaxed, however they must be no worse than 2.7Wm²k.

New Dwellings-Approved Document L1A

As with the existing method of compliance, the CO₂ emissions associated with the energy consumption of the whole building remains as the sole criterion. The predicted rate of emissions (the Dwelling Emissions Rate) must not exceed the Target Emissions Rate (based on a notional dwelling). The standard government software, SAP, provides the means for demonstrating compliance. There are backstop values that a window manufacturer needs to be aware of, but in practice the thermal performance requirements for the contract will be specified to meet the Dwellings Emissions Rate.

Windows, doors and curtain walling
Whole element U-Value 2.0Wm²k.

- A cautionary note that windows of less than 20% floor area can provide inadequate levels of daylight leading to additional use of artificial light.

New Buildings Other Than Dwellings-Approved Document L2A

As with the existing method of compliance, the CO₂ emissions associated with the energy consumption of the whole building remains as the sole criterion. The predicted rate of emissions (the Building Emissions Rate) must not exceed the Target Emissions Rate (based on a notional dwelling). Approved Government software, SBEM, provides the means for demonstrating compliance.

There are backstop values that a window manufacturer needs to be aware of, but in practice the thermal performance requirements for the contract will be specified to meet the Buildings Emissions Rate.
Windows, doors and curtain walling
Whole element U-Value 2.2Wm²k.

High usage entrance doors
Whole element U-Value 3.5Wm²k.

- If a case can be made, buildings that may be subject to high internal gains can have their area weighted U-Values relaxed, however they must be no worse than 2.7Wm²k.



Part L Transition Period

Government has released details, regarding the transition period of the revised Part L of The Building Regulations for England and Wales and can be summarised as follows:-

- Where work has commenced prior to 1st October 2010 the installation may be completed in accordance with the current 2006 version of Part L.
- Where a contract has been agreed prior to 1st October 2010 the installation may be completed in accordance with the current 2006 version of Part L providing that the work commences before 6th April 2011.
- Where a Building Notice, an Initial Notice, Plans Certificate, Amendment Notice, Public Body's Notice or full plans submitted prior to 1st October 2010 the installation may be completed in accordance with the current 2006 version of Part L providing that the work commences before 1st October 2011.

Approved Document F – Ventilation

The situation regarding the use of trickle vents in windows remains relatively unchanged.

There is no requirement to install trickle vents in replacement windows unless the windows being removed have them, however the document suggests that it would be good practice.

For new buildings the sizes remain at 5000mm² equivalent area for habitable rooms and 2500mm² for bathrooms, kitchens and utility rooms.

Scotland Section 6 – Energy (Domestic)

The requirements for domestic windows/doors are as follows:-

Windows and Doors
Area weighted U-Value 1.6Wm²k or better
(Replacement)
Window Energy Rating minimum Band C.

Windows and Doors (Newbuild)
Backstop values U-Value 1.8Wm²k or better

Extensions
(Where existing building has walls 0.7 Wm²k and roof 0.25 Wm²k or <)
Area weighted U-Value 1.6Wm²k or better Window Energy Rating minimum Band C.

Extensions
(Where existing building has walls > than 0.7Wm²k and roof 0.25 Wm²k)
Area weighted U-Value 1.4Wm²k or better Window Energy Rating Band A.

Conservatories
Area weighted U-Value 2.0Wm²k or better (frame/glazed elements)

Additional considerations:-

- Conversions of unheated buildings (inc.barn, garage, loft conversions) should be treated the same as extensions.
- Windows in extensions should be limited to 25% of the extension floor area inc. any openings built over as a result.
- U-Values for extensions may be varied providing that the area weighted value of all building elements is no greater than a notional extension.
- Where 1 or 2 replacement windows/doors are installed to allow matching with existing building and where the above requirements cannot be met a centre pane U-Value of 1.2Wm²k may be used.
- No minimum or maximum window sizes have been set for newbuild due to a balance required of innovative solutions between heat loss and solar gain along with natural and artificial light. This will be decided by the dwellings emission rate.
- Conservatories are exempt from the Building Warrant if they do not exceed 8m², are thermally divided from the dwelling to the same level as other exposed elements, does not contain a flue, fixed combustion appliance, sanitary facility or located within 1 metre of a boundary.
- Where alterations are carried out, attention should be paid to limiting thermal bridging around windows/doors.



Energy

Section 6 – Energy (Non-Domestic)

Windows and Doors (Newbuild)
Backstop values U-Value 2.0Wm²k or better

Windows and Doors (Replacement)
Area weighted U-Value 1.6Wm²k or better

Conversions of (Heated buildings)
Area weighted U-Value 1.6Wm²k or better

Shell buildings (for later fit out)
Area weighted U-Value 1.6Wm²k or better

Extensions
Area weighted U-Value 1.6Wm²k or better and sizes should not exceed the following area of exposed wall:-

- o 40% for residential buildings, offices, shops, assembly and entertainment buildings.
- o 15% for industrial and storage units.
- U-Values for extensions may be varied providing that the area weighted value of all building elements is no greater than a notional extension.
- No minimum or maximum window sizes have been set for newbuild due to a balance required of innovative solutions between heat loss and solar gain along with natural and artificial light. This will be decided by the buildings emission rate.

- Where 1 or 2 replacement windows/doors are installed a centre pane U-Value of 1.2Wm²k may be used.
- With certain exceptions there are no U-Value requirements for display windows (eg: shop fronts).

Conclusion

Deceuninck have made no secret of the fact that we support the Window Energy Rating (WER) scheme due to the labelling and the familiarity and simple message that it provides to the consumer. Despite our backing for WER's, we believe that it may not be the best way to demonstrate compliance for all fabricators / installers or for every installation. Even for those who would prefer to do everything via the WER route, there is still the small matter of entrance doors which will need to be measured by 'U'-Value as there is no rating scheme for doors. We see this as a key issue, because demonstration of compliance using 'U'- Value will need to change.

The days of verification of installation simply being the check for the presence of low 'e' glass in a PVC-U frame as deemed to have met the requirements for thermal performance will no longer be possible. As a result fabricators/installers using U-Value as a means of compliance will need to have evidence that the FENSA/ CERTASS/Building Control Inspector can easily verify.

To this end, Deceuninck will be introducing a number of indicative U-Value tables, calculated in accordance with BR 443 to enable compliance where no calculated WER or U-Value data is available. We believe that this will be the most cost effective method for demonstrating compliance for less popular product ranges and changes in component make-up. These indicative tables will be available in advance of 1st October 2010.



Disclaimer

Full compliance with The Building Regulations (England and Wales) and Building Standards Technical Handbooks (Scotland) are not limited to those that can be found in this document.

Further information can be found by visiting the following websites:-

for England and Wales

<http://www.planningportal.gov.uk/england/professionals/buildingregs/technicalguidance/bcapproveddocumentslist/>

and for Scotland

<http://www.scotland.gov.uk/Topics/Built-Environment/Building/Building-standards/publications/pubtech>

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