



FOR NOW  
FOR THE FUTURE  
FOR LIFE

# A GUIDE TO ENHANCED SECURITY OF WINDOWS AND DOORSETS



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## DISCLAIMER

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# 1. INTRODUCTION

Since the introduction of Approved Document Q (ADQ), Security-Dwellings, to The Building Regulations (England) in October 2015 there has been a slow but steady increase in the number of questions to the VEKA Technical Department regarding the security of windows and doorsets. However our records show that the pace of enquiries has increased significantly since the beginning of 2018 which suggests that Planners, Architects, Builders and Local Authority Building Control are beginning to get to grips with the regulation and enforcing it widely.

VEKA has made presentations to customers and their customers with regard to ADQ and the wider subject of enhanced security since the regulation came into effect, but to respond to customer requests we have introduced this guide to cover the most salient requirements to reach a wider audience.

Many questions that are asked around this subject have a common theme and to address this we hope that you find the Frequently Asked Questions or FAQ's section at the back of this guide an invaluable companion. We also find that there is confusion in the marketplace when clients request secure window and doorsets. When and where do ADQ, PAS 24 and Secured by Design (SBD) apply? Are they the same thing? Which should I specify? We hope that this guide successfully answers those questions and many more.

Testing standards and laboratory test methods are always changing and improving. We have 4 Technical Service Engineers covering all parts of the UK, along with myself who are at your service. We are here to give expert guidance from day one, for both factory support and/or advice with your next audit test or certification requirement from the beginning of your project through to completion. As a result we would like to hear from you. If you have requirements that our current product certification does not currently fulfil, we have an extensive and on-going testing programme and whilst we may not be able to test everything, there could be instances where we can incorporate that missing link, such as a newly launched piece of hardware on our next testing contract.

Regulation, certification and testing of windows and doorsets are becoming increasingly important and onerous. As your system supplier partner we are continually striving to improve. If there are additional subjects or questions that you would like to see answered in this document, please do not hesitate to get in-touch by dropping me a line or giving me a call using the contact details below.

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## 2. APPROVED DOCUMENT Q

Approved Document Q (ADQ), Security-Dwellings became part of the Building Regulations in England on 1st October 2015 and was the outcome of the Coalition Government review known as 'The Red Tape Challenge'. There was a temporary reprieve for any construction project which had been submitted for planning prior to this date but this exemption expired on 1st October 2016.

### HOW DO I COMPLY WITH APPROVED DOCUMENT Q?

- Secure windows/doorsets should be made to a design that has been shown by test to meet the requirements of British Standards publication PAS 24:2012. This can be achieved by one of the following methods;
  1. Carry out own testing to PAS 24 at an approved UKAS test laboratory;
  2. Cascade or 'piggyback' test results from a **3rd party\*** (see FAQ"s).
  3. Purchase finished products from a supplier who has carried out their own testing.
- Is applicable to easily accessible (see FAQ'S) windows/doorsets (of all framing materials) in new dwellings or those formed from a change of use. This includes entrance doors to flats/apartments and interconnecting doors (e.g.: through a garage).
- Is not applicable to replacement windows/doorsets, or those in extensions or conservatories.
- Main entrance doorsets should contain a;
  1. Chain or limiter;
  2. Viewer (unless door or side panel includes clear glazing);
  3. Letterplate with maximum aperture of 260mm x 40mm with flap that prevents access to items such as keys by inserting a hand or stick etc. E.g.: Letterplate conforming to DHF TS 008:2012.
- Compliance with ADQ does not infer immunity from other parts of the Building Regulations. In particular careful consideration should be given (but not limited) to;
  - ADB - Fire Safety,
  - ADE - Resistance to Sound,
  - ADK - Safety Glazing/Protection from Falling,
  - ADL - Conservation of Fuel and Power,
  - ADM - Access to and Use of Buildings,Some or all of which may affect the product performance and security specifications of windows/doorsets and/or glazing required by ADQ.
- Further information can be found by downloading a PDF copy of ADQ free of charge by visiting [https://www.planningportal.co.uk/info/200135/approved\\_documents/](https://www.planningportal.co.uk/info/200135/approved_documents/)

## 3. PAS 24

Product Assessment Specification (PAS)24 is the enhanced security standard which covers the performance and test requirements of enhanced security windows/doorsets. Since the original standard (PAS 011) was published in 1994 it has gone through various iterations, including BS 7950. At the time of publication ADQ(England) and **SBD still call up the previous standard (PAS 24:2012)\*** but almost all UKAS approved laboratories are now testing to the latest standard PAS 24:2016.

### HOW DO I COMPLY WITH PAS 24?

- PAS 24 enhanced security is a minimum standard. A product either passes or fails.
  - It does not mean that the window/doorset is impenetrable and it does not cover methods in which the product is installed/attached to the building.
  - Whilst later iterations of the standard have evolved to meet the changing methods of real life attack, the spirit of the standard is designed to replicate a series of controlled, repeatable laboratory tests representing those used by an opportunist burglar.
  - Testing to PAS 24 includes the following elements:
    1. Mechanical loading,
    2. Manual attack using a prescribed set of tools by hardware manipulation and infill removal via cutting,
    3. Hard and soft body impact,
    4. Cylinder (DHF TS 007) and letterplate (DHF TS 008) vulnerability on doors.
  - It is important to distinguish the difference between a 'one-off' type test that may enable a manufacturer to comply with ADQ and claiming 'certified to' or compliance with' PAS 24.
- For a manufacturer to comply with PAS 24 will involve regular on-going assessment and certification to BS 7412, via factory audits and testing to check conformity, including registration to a 3rd party certification scheme.
  - 3rd party certification schemes will also require a manufacturer to demonstrate that products are fit for purpose by ensuring window/doorsets are tested to the BS 6375 series of standards.
  - If you would like further advice on testing and certification, please contact Mark Barsby at VEKA Group, via email to [mbarsby@veka.com](mailto:mbarsby@veka.com)
  - PAS 24:2016 can be purchased from <https://shop.bsigroup.com/>

\*From 1st October 2018, SBD will only accept products with independent 3rd party certification to the latest version of the standard PAS 24:2016.

## 4. SECURED BY DESIGN

Secured by Design (SBD) is a Police initiative to design out crime by making properties and developments more secure. Research findings suggest that by working with local authorities, housing associations, landlords and residents; SBD not only reduces crime but provides efficiencies and cost savings for a number of stakeholders. Moreover SBD is not simply applicable to windows and external doorsets, but includes requirements for effective lighting, paving, planting, boundaries etc.

### HOW DO I COMPLY WITH SBD?

- SBD requires the manufacturer (not the systems supplier) of the windows and/or doorsets to be 3rd party certified – not only to PAS 24 but also 'Fit for Purpose' standards BS 7412 and the BS 6375 series. Please note that from 1st October 2018, SBD will only accept products with independent 3rd party certification to the latest version of the standard PAS 24:2016\*.
- Or alternatively the European burglary resistance standards EN 1627-1630. Unlike PAS 24 the European standards are not pass/fail and have 6 different classifications. In the UK, class 2 is required for windows and class 3 for doorsets. In addition the Euro standards do not include tests for cylinders or letterplates. Test evidence for DHF TS 007/008 will also be required.
- Other routes to compliance include Loss Prevention Standards (LPS) and Security Technical Standards (STS). Where specified, SBD covers most building types either domestic or commercial, whether they are newbuild or refurbishment. Further information can be found by downloading the SBD Design Guides in PDF format free of charge by visiting <http://www.securedbydesign.com/industry-advice-and-guides/#dsgngd>
- A door which is either the primary or only means of escape in case of fire must have keyless egress (e.g.: thumb turn cylinder). The manufacturer must demonstrate that this is part of the scope of the certified product range.
- SBD is a specification and not a standard. Providing a manufacturer can demonstrate that they are part of a 3rd party certification scheme with test evidence covering one of the methods described above, the SBD scheme requirement for windows and doorsets has been met. The manufacturer does not need to be a member of SBD.
- VEKA Group are members of Secured by Design. For confirmation, please see the following webpages; <http://www.securedbydesign.com/members/veka-plc/> <http://www.securedbydesign.com/members/halo/>

\*It should be noted that VEKA has already transitioned its Kitemark Certification of all product ranges to PAS 24:2016.

## 5. FREQUENTLY ASKED QUESTIONS

### GLASS

**Q:** Do I need to fit laminated glass?

**A:** One pane of laminated glass must be fitted to all easily accessible windows and doorsets (see below for definition of easily accessible).

**Q:** Is 6.4mm thick laminated glass acceptable?

**A:** No – 6.4mm laminated is designated as a safety glass only. To meet the security requirements of PAS 24, 6.8mm thick laminated glass must be fitted where stated.

**Q:** Do I need to fit laminated glass to all doors in the building?

**A:** Laminated glass must be fitted to all easily accessible doors, door side panels and fan lights or windows which are within 400mm of a door.

**Q:** What about windows?

**A:** Not all windows require laminated glass. Easily accessible windows are defined as those which are installed within 2m. of a flat surface (e.g.: ground or basement level) or 3.5m. if accessible from a flat or sloping roof (30°). Additionally easily accessible emergency egress windows which are fitted with non-lockable hardware also require laminated glass.

**Q:** Which side should the laminated glass be fitted?

**A:** It can be fitted on either the inside or outside, however the following should be agreed with the client in the final specification;

- Glass is more often broken or fractured on the outside from blunt objects (eg:footballs), therefore it is good practice to ensure that where there is also a requirement for toughened/safety glass (e.g.: in a door) that this is to the external pane so that it breaks safely,
- The effect of orientation on WER/DSEI energy index and ratings, particularly when used as a compliance method for Building Regulations.

**Q:** Do I still need to fit toughened glass?

**A:** The laminated glass requirement for easily accessible window/doorsets does not discharge your obligations to protect against impact with glazing (ADK4 of Building Regulations). Where doors and sidepanels are glazed within 1500mm of floor/ground level (including windows with glazing 300mm either side of a door) or windows glazed within 800mm of floor/ground level, the opposing pane of glass shall be toughened.

## 5. FREQUENTLY ASKED QUESTIONS

### EASILY ACCESSIBLE

**Q:** Do all windows/doorsets on the contract/development need to comply?

**A:** Over specification is a common fault. Enhanced security requirements in ADQ/PAS 24/SBD specifications only apply to easily accessible window/doorsets. As per the requirements for laminated glass this is defined as those which are installed within 2m of a flat surface (e.g.: ground or basement level) or 3.5m if accessible from a flat or sloping roof (30°).

### OTHER UK COUNTRIES

**Q:** I am a national supplier of trade windows, do I need to comply with ADQ in other UK countries?

**A1:** The Welsh Assembly has announced that they will incorporate ADQ into Building Regulations from 1st November 2018. There will be a 12 month exemption where plans have been submitted prior to this date. At the time of publication, due to its implementation date (01.10.2015), ADQ in England still allows test evidence to the previous version of the standard (PAS 24:2012), however ADQ in Wales will be implemented only accepting PAS 24:2016. It should be noted that VEKA has already transitioned its Kitemark Certification of all product ranges to the latest version of the standard. A PDF copy can be downloaded free of charge by visiting;  
<https://gov.wales/topics/planning/buildingregs/approved-documents/?lang=en>

**A2.** Scotland has had a security requirement in its Building Standards for some time. Domestic Technical Handbook 4 (Safety), Section 4.13.1-Physical security of doors and windows outlines 3 methods all of which are covered by this document;

- Via the physical security requirements outlined in Secured by Design
- Products which are tested and certified by a notified body (e.g.: PAS 24). It should be noted that Section 4.13.1, also references withdrawn standards PAS 24:2007 (doorsets) and BS 7950:1997 (windows)
- Products which are manufactured to meet recognised product standards and defined component performance. (e.g.; cascading or 'piggybacking') A PDF copy can be downloaded free of charge by visiting; <http://www.gov.scot/Topics/Built-Environment/Building/Building-standards/publications/pubtech>

**A3** Northern Ireland Building Regulations has no specific security requirements for windows/doorsets. Neither does the Channel Islands (Jersey/Guernsey).

# 5. FREQUENTLY ASKED QUESTIONS

## ENHANCED SECURITY CHECKLIST

**Q:** Will my current window/doorset satisfy the enhanced security requirements of ADQ/PAS 24/SBD?

**A:** It is unlikely that your current windows and/or doorsets will meet the requirements of ADQ/PAS 24/SBD unless they are manufactured to include the following;

- Fully reinforced,
- VEKA approved reinforcement\* to locate hardware fixings where possible;
- Hinge protectors;
- Ensure high security locking mechanisms (e.g.: espagnolette) have locking points within 100mm of corners;
- Security glazing clips on all products including internally and externally beaded;
- Additional run-up blocks to limit lateral sash movement.
- Additional glazing packers to IGU's adjacent to all locking points;
- For further information please refer to the relevant VEKA/Halo manufacturing guide.

## CASCADING OR 'PIGGYBACKING' TEST RESULTS

**Q:** Will I need to get my products tested/certified or can I use VEKA test results?

**A:** VEKA are able to cascade test results to enable manufacturers to comply with ADQ, however if a manufacturer wishes to claim compliance to PAS 24 or SBD they must be certified and hold 3rd party certification in their own name.

**Q:** How can I cascade test results to comply with ADQ?

- A**
1. VEKA has a number of hardware options tested to PAS 24 which can be provided for cascading for Approved Document Q,
  2. Contact Mark Barsby, [mbarsby@veka.com](mailto:mbarsby@veka.com) to establish the VEKA PAS 24 test data and hardware specification which matches closest to the product which you supply,
  3. **Sign and return a VEKA cascading agreement (which will be supplied) to undertake manufacture in accordance with the specification provided\***,
  4. VEKA Group does not accept any liability, whether directly or indirectly for incorrect use, non-compliance or loss by using the information contained in the VEKA PAS 24 test data and hardware specification in whole or in part. It is the responsibility of the company who has signed the VEKA cascading agreement to ensure the installed product complies with ADQ.

**Q** I have established that the contract requires PAS 24 and/or SBD. How do I get my products tested and 3rd party certified?

**A** Please refer back to sections 3 & 4 of this document. For further advice contact Mark Barsby, [mbarsby@veka.com](mailto:mbarsby@veka.com) who can advise on test requirements and certification bodies.

\*All test evidence supplied by VEKA to support customers/manufacturers to comply with ADQ, certification to PAS 24 and specification to SBD are valid when used with approved products (such as steel reinforcement) supplied by VEKA only. VEKA does not accept liability for 3rd party products. Where products are substituted by the window/doorset manufacturer for 3rd party alternatives such as (but not limited to) steel reinforcement or hardware or fixings, liability becomes the responsibility of the window manufacturer to prove that the 3rd party product(s) is/are fit for purpose, meet the specification (e.g.; ADQ, PAS 24, SBD) and to provide a suitable warranty/guarantee.