

# mechanical testing



**committed to excellence**

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Chiltern International Fire and Chiltern Dynamics, as part of the BM TRADA Group, have more than 70 years' experience in providing practical solutions in the field of testing and consultancy for the construction industry. We are renowned for our specialist expertise in doors and windows and our ability to help our clients make informed decisions about their products.

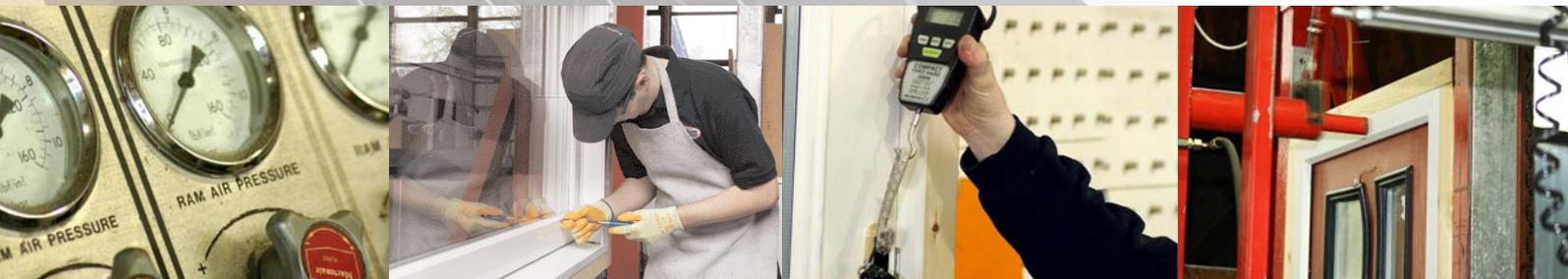
Chiltern Dynamics offers independent, UKAS-accredited testing services for doors and windows. Our testing is recognised for Secured by Design (SBD), third-party certification and CE marking of products. We are considered a centre of excellence for performance testing of building products. Chiltern Dynamics maintains an active membership of European and national technical committees.

## what is mechanical testing?

The primary purpose of the mechanical testing of products is to determine whether they are fit for purpose in their end-use application. The sale of doors and windows into UK, European and international markets often requires testing against a range of standards covering characteristics such as security, weather performance and durability.

Mechanical testing is important in order to:

- satisfy individual specifiers' contract requirements
- meet the requirements of SBD for supply into social housing
- meet the requirements of product standards (such as EN 14351 and EN 13241) for CE marking enabling international trade.



# Chiltern Dynamics' mechanical testing services

We offer one of the most comprehensive ranges of UKAS-accredited testing services available for doors and windows. Whilst diverse in nature and scope, all of our testing services have one goal. They are designed to help our clients achieve their objectives in the most efficient and economical way possible. We do this by following a clear and logical process as detailed below:

## explore

First and foremost, we take the time to understand our clients' requirements. This is an essential stage where we actively encourage our clients to talk to us about their products and explain what they are hoping to achieve. We find many clients turn to us precisely because they appreciate having the opportunity to discuss their products with experts prior to their investment in product test programmes. As part of this approach, we can also undertake a review of our clients' product ranges.

## develop

Once we have thoroughly explored our clients' plans for their products, and in turn, have shared with them our knowledge of legislative and market requirements, we are then in a position to develop the most appropriate cost-effective test programme. By this stage, we will have made sure that we have gained sufficient information about our clients' objectives and that our clients have understood the scope of the test data generated.

By listening to and involving our clients at every stage, particularly during the test programme, we help our clients in a way that we feel is unique to Chiltern Dynamics.

## testing and support

We test doors and windows to current British and European standards for individual specifier requirements, SBD and CE marking.

### security testing

We test to the following security standards:

- PAS 24
- BS 7950
- European burglary resistance standards (to be EN 1627, EN 1628, EN 1629, EN 1630)

The biggest driver currently in the UK for security testing (PAS 24 and BS 7950) is Secured by Design. This is the UK police flagship initiative supporting the principles of 'designing out crime' by use of effective crime prevention and security standards for a range of applications. Research shows that Secured by Design can reduce burglary crime by 50% and criminal damage by 25%. It supports one of the Government's key planning objectives - the creation of secure, quality places where people wish to live and work.



## weather performance testing

Weather testing involves evaluating the performance of products against three criteria:

- air permeability (tightness): BS EN 1026 and BS EN 12427
- watertightness: BS EN 1027 and BS EN 12489
- resistance to wind load: BS EN 12211 and BS EN 12444.

The results of testing allow classification to BS 6375 Part 1 for pedestrian windows and doors in the UK, or relevant European standards for industrial doors.

## further performance criteria

Additional tests required may include:

- PAS 23 (as part of the BS 6375 series)
- BS EN 1191
- BS EN 1192
- DD171
- HTM58 (NHS Estates: Internal Doors).

These tests can be used to evaluate the following characteristics:

- operating forces (effort required to operate doors and windows)
- repeated opening and closing of doors and through cyclic testing
- abuse in operation.

## client specific test programmes

In addition to our comprehensive range of standard testing, Chiltern Dynamics can also work with clients to develop testing services for market specific projects. During our 70 years' service providing practical solutions in the field of testing and consultancy, we have gained an impressive reputation within the industry for our ability to develop bespoke testing programmes for products that are either non-standard or completely new to the market for which no recognised testing standards exist.

An example of such a programme is CDTM01, which involves testing that is based on British and European standards to facilitate the classification of doors for end-use and assist in the planning of a maintenance schedule. Initially developed to address the needs of a specific project, CDTM01 has since gained wider industry recognition and is regularly used as the standard in PFI projects for schools and hospitals.

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## why choose Chiltern Dynamics?

- Chiltern Dynamics is one of the most experienced, independent mechanical testing organisations in the UK. We provide mechanical testing of windows and doors for both commercial and domestic buildings.
- The real value we offer is not just in the physical testing of our clients' doors and windows, but in the support we offer at every stage of the testing process.
- Our clients choose us because we take the time to explore their requirements. As part of this approach, we encourage our clients to talk to us about their products and explain what they are hoping to achieve.
- We develop test programmes only when we are sure that we have gained sufficient information about our clients' objectives. Furthermore, we ensure that our clients have understood and are completely satisfied with the scope of test data to be generated.
- We work with clients to develop test methods for products not contained in current standards. Examples of previous work we have been involved with include drafting test methods for double doors, sliding doors and vertical sliding windows.
- Our 70 years' experience in providing practical solutions in the field of testing and consultancy gives us an unrivalled understanding of the responsibilities and pressures our clients face to complete their projects on time within budget.
- We believe in taking responsibility for ensuring that the mechanical testing process is as streamlined and efficient as possible. From simple individual tests to a complex development programme, our goal is to offer fast response times and immediate feedback.
- We have a responsive, flexible approach to clients' needs, problems and future development requirements. We offer a dedicated level of service that we believe is unmatched within the industry.

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