

WINTECH

BUILDING ENVELOPE TESTING

Test Report



2223

Report No: R160013 Rev 1

Flex Restrictor strength test report.

Note: to protect third party confidentiality, some company names have been obscured in this version. No technical data has been modified.

Project

Project Ref: 160013

Rev 1 – this report has been amended by changing the project reference on the front page and it replaces previous report No. R160013 dated 15th June 2012.

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Testing Conducted by: Wintech Engineering Limited
Halesfield 2
Telford
Shropshire
TF7 4QH

Test carried out at: Above address

Standards Specified: BS EN 14351-1:2006(as amended by in house document TP7)


Project No: 160013

Dates of Testing 12th June 2012

Tests Performed: As listed in Section 5 – Test Procedures

Testing Conducted by: D Potts Wintech Engineering Ltd
A Price Wintech Engineering Ltd

Report Compiled by: J Hollins 
Technical Assistant

Technical Approval: M Wass 
(Authorising Signatory) Quality & Technical Manager

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1. INTRODUCTION

This report describes testing conducted at the Test laboratory of Wintech Engineering Ltd on various window restrictors

Testing was conducted on 12th June 2012, in order to determine compliance with the standards shown below.

BS EN 14351-1:2006 Windows and doors – Product standard, performance characteristics
– Clause 4.8 as per in house procedure TP7

Wintech Engineering Ltd is accredited by the United Kingdom Accreditation Service as UKAS Testing Laboratory No. 2223 for this type of testing.

The restrictors were supplied fitted to various windows and mounted to the test rig or frame by Wintech Engineering Ltd.

2. DESCRIPTION OF TEST SAMPLE

Name of product:	SMARTS System Ltd – Alutherm 47 Casement
Sample Size:	600mm wide x 1000mm high
Window Material Type:	Commercial Aluminium
Joining Method:	Mechanically joined via cleat & press (mitred)
Infill Medium:	24mm MDF Panel
Gaskets:	N/A – Glazing = wedge & retained N/A – bubble to sash and frame over rebates
Locking Points:	Two cockspur handles, opposing hinge side
Hardware Used:	Pace butt hinges x 2 Securistyle cockspur handles – 9mm nose
Sub-Frame Fixings:	Window frame fixed to timber sub-frame using 14 wood screws no 10 x 2"
Drainage:	N/A
Sealants Used:	N/A
Hardware Fixings:	X4 – 3.9 x 16mm self drill/tap – csk head screws – zinc 240. QW3 3525/16

See Appendix A for test sample drawings as supplied

3. TEST ARRANGEMENT

3.1 TEST RIG

The window frames were mounted in 100 x 75 mm timber sub-frames in accordance with manufacturer's installation requirements. They were secured into the test rig which has been constructed to meet the requirements of the test specification.

Figure 1

Picture of Test Rig



3.2 INSTRUMENTATION

3.2.1 A calibrated stop watch was used to measure/record time.

3.2.2 A digital data logger capable of measuring temperature with an accuracy of +/- 1°C was used for temperature and RH with an accuracy of +/- 5%.

3.2.3 Calibrated s-beam load cells were used with an accuracy of +/- 5%

All measurement devices, instruments and other relevant equipment were calibrated and traceable to National Standards.

4. TEST PROCEDURES

4.1 Load-bearing capacity of safety devices

The window was operated so that the safety device to be tested was fully engaged. A load of **350 N** was then applied in the most unfavourable position and direction and was held for a period of **60 secs**, as required by BS EN 14351-1:2006 and in house document TP7.

5. TEST RESULTS

5.1 Load-bearing capacity of safety devices

A static load of **350 N** was applied to the safety device for duration of **60 secs** when secured to the window. Following each test, no damage was evident and the window continued to function correctly.

Table 1

Window/Material Type	Test Type	Result (350 N)
Side Hung – Aluminium	BS EN 14351:2006 Clause 4.8	Pass

5.2 Additional load test

Following the regulatory test as described in Section 5.1, the window was then tested with a load of **932 N**. The results are shown in Table 2 below.

Table 2

Window/Material Type	Load (N)	Result
Side Hung – Aluminium	932 N	Pass

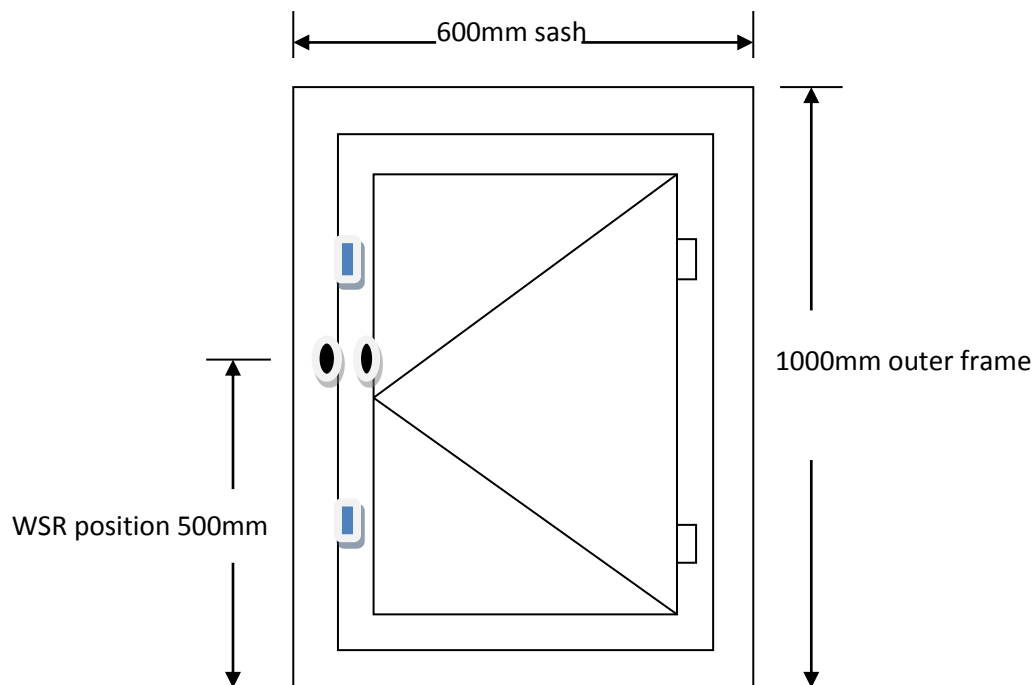
These results are valid only for the conditions under which the test was conducted.


APPENDIX A


3 off drawings on 3 un-numbered pages

BS EN 14351 Clause 4.8. Load Bearing Capacity Test.

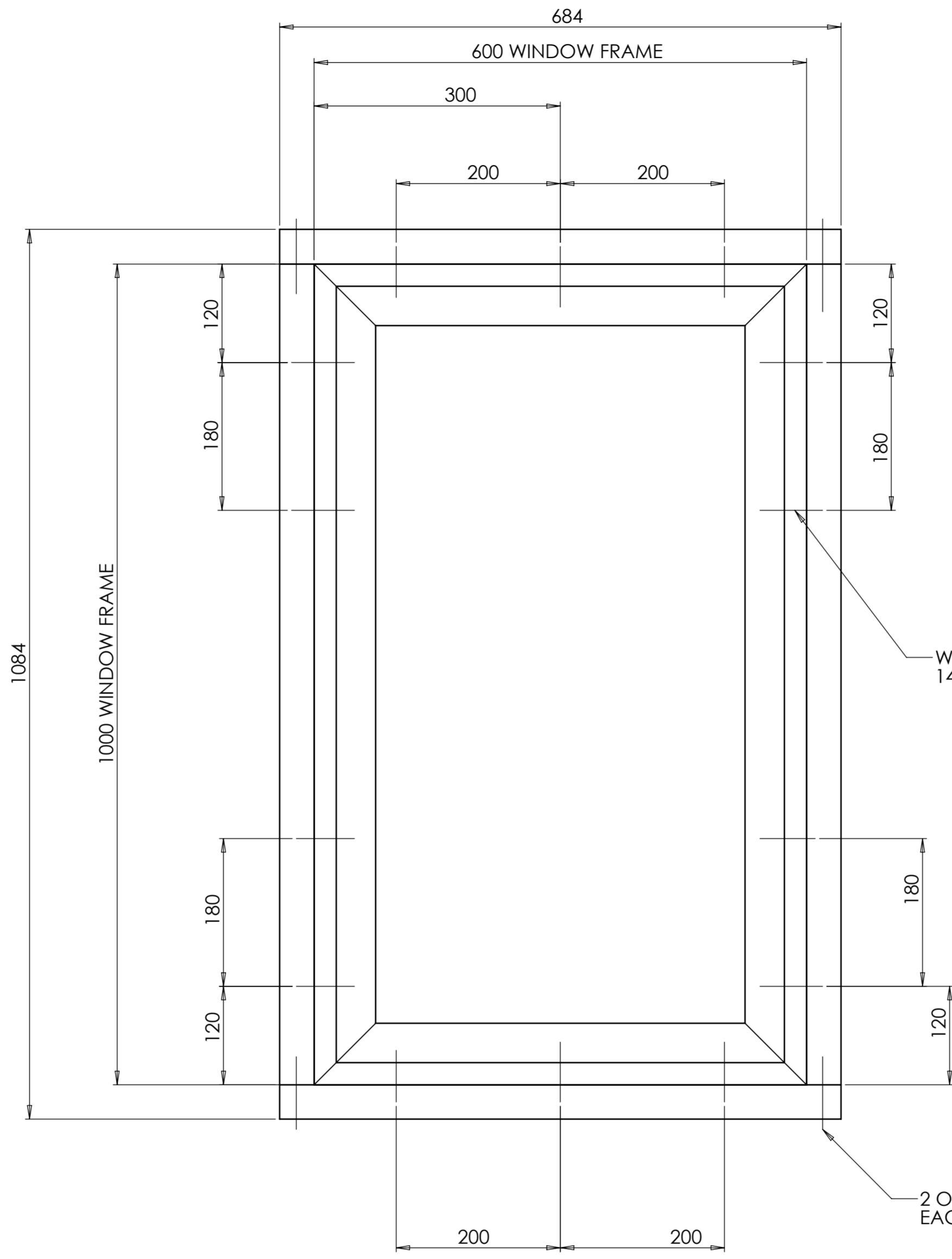
Product: Window Safety Restrictor



 = Cockspur handles x2 set at 300mm from top and bottom of frame.

 = Butt hinges x2.

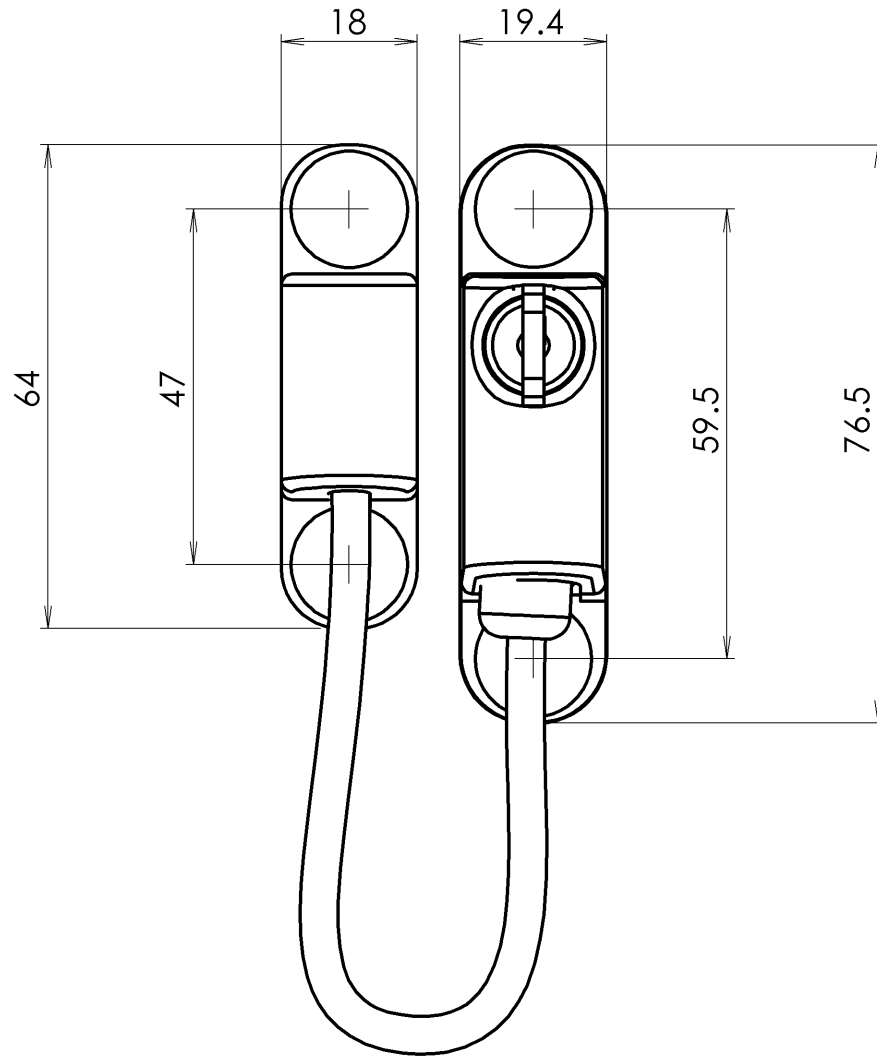
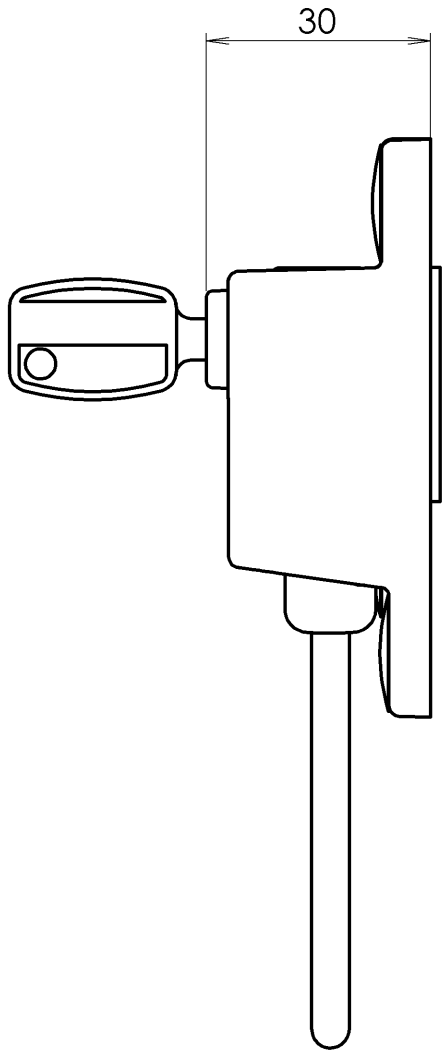
DM - 18.06.2012.



WINDOW FRAME FIXED TO TIMBER SUB-FRAME USING 14 WOOD SCREWS No10 x 2"

SUB-FRAME CONSTRUCTED FROM 95x45 PLANED TIMBER

2 Off No8 x 4" WOOD SCREW IN EACH CORNER OF FRAME



+++++ End of Report +++++