# Test Report

| | |
|---|---|
| Report No | 2370/7782492 This Report consists of 18 pages |
| Client | Smart Systems Limited<br>Arnolds Way<br>Yatton<br>BS49 4QN |
| Authority & date | Request by client dated 20 December 2011 |
| Items tested | 4 off Aluminium windows, Smart Systems Alitherm 600 Internally Glazed Casement Window Systems |
| Specification | BS 7950:1997 Specification for enhanced security performance of casement and tilt/turn windows for domestic applications |
| Results | Pass |
| Prepared by | D Kirsop (Senior Technician) |
| Authorized by | M Manito (Senior Engineer) |
| Issue Date | 08 February 2012 |
| Conditions of issue | This Test Report is issued subject to the conditions stated in current issue of CPO322 'General conditions relating to acceptance of testing'. The results contained herein apply only to the particular sample/s tested and to the specific tests carried out, as detailed in this Test Report. The issuing of this Test Report does not indicate any measure of Approval, Certification, Supervision, Control or Surveillance by BSI of any product. No extract, abridgement or abstraction from a Test Report may be published or used to advertise a product without the written consent of the Managing Director, BSI, who reserves the absolute right to agree or reject all or any of the details of any items or publicity for which consent may be sought. |

UKAS TESTING
0135

**TEST, EXAMINATION AND ASSESSMENT OF FOUR ALUMINIUM WINDOWS, SMART SYSTEMS ALITHERM 600**

## INTRODUCTION

At the request of the client the Aluminium windows, detailed below and described on pages 4 and 11, were tested and assessed to the requirements of BS 7950:1997 Specification for enhanced security performance of windows for domestic applications incorporating Amendments 14289 and 15666, as indicated on the following pages of this Report. This request was made on Quotation No BSI0000360080 dated 20 December 2011. It is emphasized that assessments have not been made against the other Clauses of the Specification.

## TEST SAMPLE

2 off projecting side hung next to projecting side hung windows (Sample 1)

2 off projecting top hung windows (Sample 2)

(Equipment Record No 10132932)

Date sample received: 2 February 2012

## SUMMARY OF RESULTS

| | | |
|---|---|---|
| 1. | Manipulation | The test samples met the requirements of the Specification in respect of Clause 7 Annex A.4. |
| 2. | Glazing removal | The test samples met the requirements of the Specification in respect of Clause 7 Annex A.5. |
| 3. | Mechanical loading | The test samples met the requirements of the Specification in respect of Clause 7 Annex A.6. |
| 4. | Manual check test | The test samples met the requirements of the Specification, in respect of Clause 7 Annex A.7. |

## CLAUSE 4 SAMPLE SELECTION

The samples submitted for tests were selected by the Client.

## CLAUSE 5.2 ASSESSMENT

The assessment of the test samples followed the sequence detailed in Scheme document PCP519.

## CLAUSE 6 TEST APPARATUS AND SAMPLE MOUNTING

The test apparatus used for the manual and mechanical tests is shown in Appendix A of this Report. This apparatus meets the requirements of the Specification.
Each test sample was submitted for test mounted in a 50 x 100mm timber subframe in accordance with the manufacturer's installation requirements.

**DESCRIPTION OF SAMPLE (Sample 1)**

| | | |
|---|---|---|
| **Sample type -** | Projecting side hung next to projecting side hung | |
| **Material -** | Aluminium | |
| **Construction -** | Cleated | |
| **Fittings (each sash) -** | Friction stays: | 16" Securistyle Defender side hung stays |
| | Locking: | a six point lock (six mushroom bolts) Trojan reverse espagnolette system operated by a key locking handle<br>4 of run up blocks<br>2 of pairs of Vector Excluder hinge protectors |
| **Glass -** | Double glazed, 4-20-4mm toughened glass sealed units | |
| **Glazing system -** | Internal beads and gaskets | |
| **Sample dimensions -** | For information only (nominal sizes) | |
| | Overall size<br>Length: 1455mm Height: 1275mm | |
| | Sash sizes<br>Length: 690mm Height: 1195mm | |

**EXAMINATION AND TEST**

Sample type - Projecting side hung next to projecting side hung

Date of test – 6 February 2012

Laboratory temperature – 19.1°C

| **CLAUSE 7 PERFORMANCE REQUIREMENTS** | **ASSESSMENT** |
|---|---|
| **Annex A.4 Manipulation test** | |
| The sample was mounted vertically in the test rig as described in Annex A.2. The test was carried out in accordance with the given objective of this Annex using the implements described in Annex A.3. | |
| The key for the lockable hardware was fully removable. No entry could be effected within 3 minutes. | Pass |
| **Annex A.5 Glazing removal test** | |
| **Annex A.5.1 Manual test** | |
| The sample was mounted vertically in the test rig as described in Annex A.2. The sample was assessed using a selection of tools as described in Annex A.3. | |
| No entry could be effected within 3 minutes | Pass |
| **Annex A.5.2 Mechanical test** | |
| The sample was mounted vertically in the test rig as described in Annex A.2. A perpendicular to plane load of 2.0kN was applied to each corner of the glazing in turn as specified in Annex A.5.2. | |
| No evidence of bead failure No entry could be effected | Pass |

**EXAMINATION AND TEST (CONTINUED)**

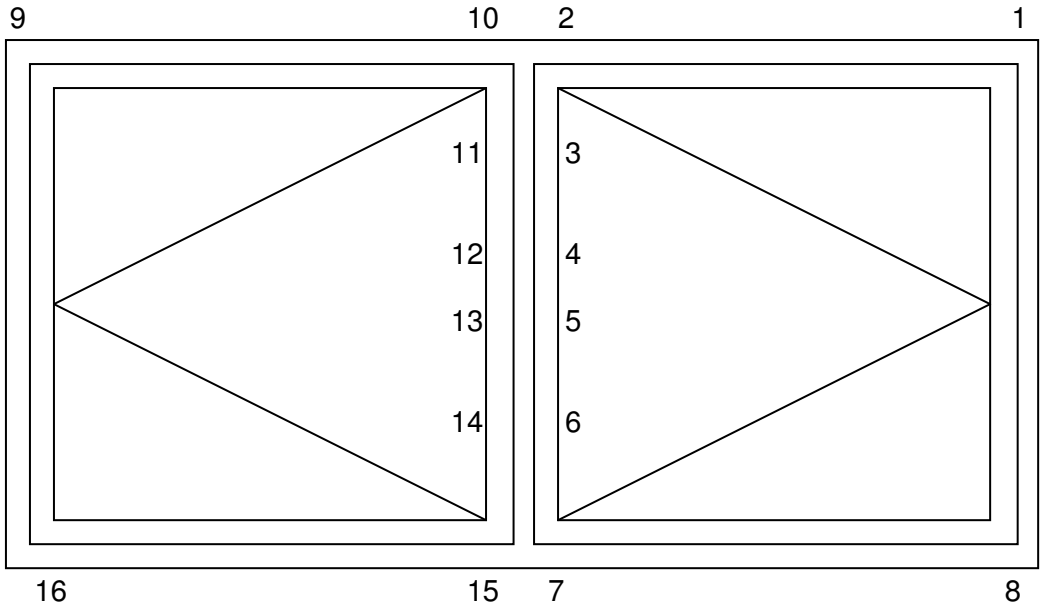
**CLAUSE 7 PERFORMANCE REQUIREMENTS**

**Annex A.6 Mechanical loading test**

The sample was mounted vertically in the test rig as described in Annex A.2.

The test was carried out in accordance with the procedures detailed in Annex A.6 and Figure 1 using the test apparatus detailed in Appendix A of this test report.

Diagram of points of application of loads




**Annex A.6.2 Loading procedure**

Point of application of load (right hand light)

**First sequence**

1 - Hinge protector/Friction stay (right head)

Standard loading case used: 5/1
Load applied in plane: 1.0kN in direction to disengage hinge protector
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN towards opposite stay
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

**EXAMINATION AND TEST (CONTINUED)** **ASSESSMENT**

**Annex A.6.2 Loading procedure**

Point of application of load

2 - Corner (mullion head)

Standard loading case used: 3
Load applied in plane: 1.0kN along edge in direction to disengage nearest locking point
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Loads applied in plane: 1.0kN at right angles to edge and towards opposite edge
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

3 - Mushroom bolt/Mushroom bolt (upper mullion)

Standard loading case used: 4
Load applied in plane: 1.0kN along edge in direction to disengage bolt
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN along edge in direction to disengage bolt
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Loads applied in plane: 1.0kN at right angles to edge and towards opposite edge
1.0kN at the mullion to oppose the above load
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

4 - Mushroom bolt (centre mullion)

Standard loading case used: 4
Load applied in plane: 1.0kN along edge in direction to disengage bolt
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Loads applied in plane: 1.0kN at right angles to edge and towards opposite edge
1.0kN at the mullion to oppose the above load
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

5 - Mushroom bolt (centre mullion)

Standard loading case used: 4
Load applied in plane: 1.0kN along edge in direction to disengage bolt
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Loads applied in plane: 1.0kN at right angles to edge and towards opposite edge
1.0kN at the mullion to oppose the above load
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

**EXAMINATION AND TEST (CONTINUED)** **ASSESSMENT**

**Annex A.6.2 Loading procedure**

Point of application of load

6 - Mushroom bolt/Mushroom bolt (lower mullion)

Standard loading case used: 4
Load applied in plane: 1.0kN along edge in direction to disengage bolt
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN along edge in direction to disengage bolt
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Loads applied in plane: 1.0kN at right angles to edge and towards opposite edge
1.0kN at the mullion to oppose the above load
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

7 - Corner (mullion sill)

Standard loading case used: 3
Load applied in plane: 1.0kN along edge in direction to disengage nearest locking point
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Loads applied in plane: 1.0kN at right angles to edge and towards opposite edge
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

8 - Hinge protector/Friction stay (right sill)

Standard loading case used: 5/1
Load applied in plane: 1.0kN in direction to disengage hinge protector
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN towards opposite stay
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

No entry effected Pass

Point of application of load (left hand light)

9 - Hinge protector/Friction stay (left head)

Standard loading case used: 5/1
Load applied in plane: 1.0kN in direction to disengage hinge protector
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN towards opposite stay
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

**EXAMINATION AND TEST (CONTINUED)** **ASSESSMENT**

**Annex A.6.2 Loading procedure**

Point of application of load

10 - Corner (mullion head)

Standard loading case used: 3
Load applied in plane: 1.0kN along edge in direction to disengage nearest locking point
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Loads applied in plane: 1.0kN at right angles to edge and towards opposite edge
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

11 - Mushroom bolt/Mushroom bolt (upper mullion)

Standard loading case used: 4
Load applied in plane: 1.0kN along edge in direction to disengage bolt
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN along edge in direction to disengage bolt
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Loads applied in plane: 1.0kN at right angles to edge and towards opposite edge
1.0kN at the mullion to oppose the above load
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

12 - Mushroom bolt (centre mullion)

Standard loading case used: 4
Load applied in plane: 1.0kN along edge in direction to disengage bolt
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Loads applied in plane: 1.0kN at right angles to edge and towards opposite edge
1.0kN at the mullion to oppose the above load
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

13 - Mushroom bolt (centre mullion)

Standard loading case used: 4
Load applied in plane: 1.0kN along edge in direction to disengage bolt
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Loads applied in plane: 1.0kN at right angles to edge and towards opposite edge
1.0kN at the mullion to oppose the above load
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

**EXAMINATION AND TEST (CONTINUED)** **ASSESSMENT**

**Annex A.6.2 Loading procedure**

Point of application of load

14 - Mushroom bolt/Mushroom bolt (lower mullion)

Standard loading case used: 4
Load applied in plane: 1.0kN along edge in direction to disengage bolt
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN along edge in direction to disengage bolt
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Loads applied in plane: 1.0kN at right angles to edge and towards opposite edge
1.0kN at the mullion to oppose the above load
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

15 - Corner (mullion sill)

Standard loading case used: 3
Load applied in plane: 1.0kN along edge in direction to disengage nearest locking point
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Loads applied in plane: 1.0kN at right angles to edge and towards opposite edge
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

16 - Hinge protector/Friction stay (left sill)

Standard loading case used: 5/1
Load applied in plane: 1.0kN in direction to disengage hinge protector
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN towards opposite stay
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

No entry effected Pass

**Annex A.7 Manual check test**

The sample was mounted vertically in the test rig as described in Annex A.2.

The test was carried out using the tools described in Annex A.7.2 in accordance with the procedures detailed in Annex A.7.3.

No alternative method of entry could be effected Pass

**Annex A.8 Additional mechanical loading test**

Not applicable as an alternative method of entry was not identified under Annex A.7.

**DESCRIPTION OF SAMPLE (Sample 2)**

| | | |
|---|---|---|
| **Sample type -** | Projecting top hung | |
| **Material -** | Aluminium | |
| **Construction -** | Cleated | |
| **Fittings -** | Friction stays: | 16" Securistyle Defender side hung stays |
| | Locking: | a six point lock (six mushroom bolts) Trojan reverse espagnolette system operated by a key locking handle<br>4 of run up blocks<br>2 of pairs of Vector Excluder hinge protectors |
| **Glass -** | Double glazed, 4-20-4mm toughened glass sealed unit | |
| **Glazing system -** | Internal beads and gaskets | |
| **Sample dimensions -** | For information only (nominal sizes) | |
| | Overall size<br>Length: 1455mm Height: 1270mm | |
| | Sash sizes<br>Length: 1400mm Height: 1200mm | |

**EXAMINATION AND TEST**

Sample type - Projecting top hung

Date of test – 6 February 2012

Laboratory temperature – 19.1°C

| **CLAUSE 7 PERFORMANCE REQUIREMENTS** | **ASSESSMENT** |
|---|---|
| **Annex A.4 Manipulation test** | |
| The sample was mounted vertically in the test rig as described in Annex A.2. The test was carried out in accordance with the given objective of this Annex using the implements described in Annex A.3. | |
| The key for the lockable hardware was fully removable. No entry could be effected within 3 minutes. | Pass |
| **Annex A.5 Glazing removal test** | |
| **Annex A.5.1 Manual test** | |
| The sample was mounted vertically in the test rig as described in Annex A.2. The sample was assessed using a selection of tools as described in Annex A.3. | |
| No entry could be effected within 3 minutes | Pass |
| **Annex A.5.2 Mechanical test** | |
| The sample was mounted vertically in the test rig as described in Annex A.2. A perpendicular to plane load of 2.0kN was applied to each corner of the glazing in turn as specified in Annex A.5.2. | |
| No evidence of bead failure No entry could be effected | Pass |

## EXAMINATION AND TEST (CONTINUED)

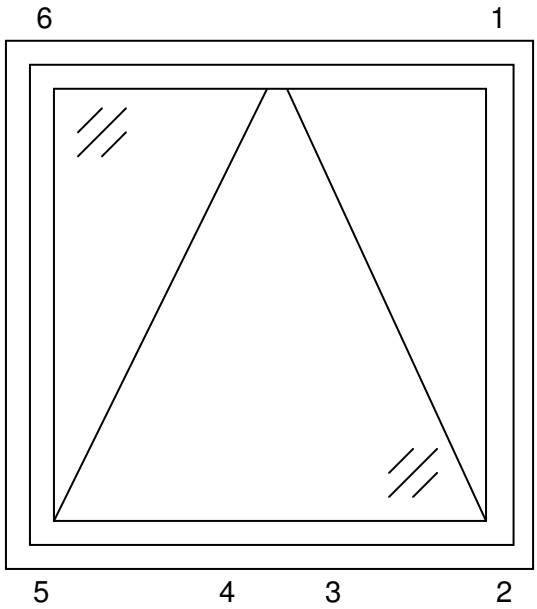
### CLAUSE 7 PERFORMANCE REQUIREMENTS

### Annex A.6 Mechanical loading test

The sample was mounted vertically in the test rig as described in Annex A.2.

The test was carried out in accordance with the procedures detailed in Annex A.6 and Figure 1 using the test apparatus detailed in Appendix A of this test report.

Diagram of points of application of loads




### Annex A.6.2 Loading procedure

Point of application of load

**First sequence**

1 - Hinge protector/Friction stay (right head)

Standard loading case used: 5/1
Load applied in plane: 1.0kN in direction to disengage hinge protector
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN towards opposite stay
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

**EXAMINATION AND TEST (CONTINUED)** **ASSESSMENT**

**Annex A.6.2 Loading procedure**

Point of application of load

2 - Corner/Mushroom bolt/Mushroom bolt (right sill)

Standard loading case used: 4
Load applied in plane: 1.0kN along edge in direction to disengage bolt
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN along edge in direction to disengage bolt
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Loads applied in plane: 1.0kN at right angles to edge and towards opposite edge
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

3 - Mushroom bolt (centre sill)

Standard loading case used: 4
Load applied in plane: 1.0kN along edge in direction to disengage bolt
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Loads applied in plane: 1.0kN at right angles to edge and towards opposite edge
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

4 - Mushroom bolt (centre sill)

Standard loading case used: 4
Load applied in plane: 1.0kN along edge in direction to disengage bolt
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Loads applied in plane: 1.0kN at right angles to edge and towards opposite edge
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

5 - Corner/Mushroom bolt/Mushroom bolt (left sill)

Standard loading case used: 4
Load applied in plane: 1.0kN along edge in direction to disengage bolt
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN along edge in direction to disengage bolt
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Loads applied in plane: 1.0kN at right angles to edge and towards opposite edge
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

**EXAMINATION AND TEST (CONTINUED)** **ASSESSMENT**

**Annex A.6.2 Loading procedure**

Point of application of load

6 - Hinge protector/Friction stay (left head)

Standard loading case used: 5/1
Load applied in plane: 1.0kN in direction to disengage hinge protector
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

Load applied in plane: 1.0kN towards opposite stay
Load applied perpendicular to plane: 3.0kN applied for 10 seconds

No entry effected Pass

**Annex A.7 Manual check test**

The sample was mounted vertically in the test rig as described in Annex A.2.

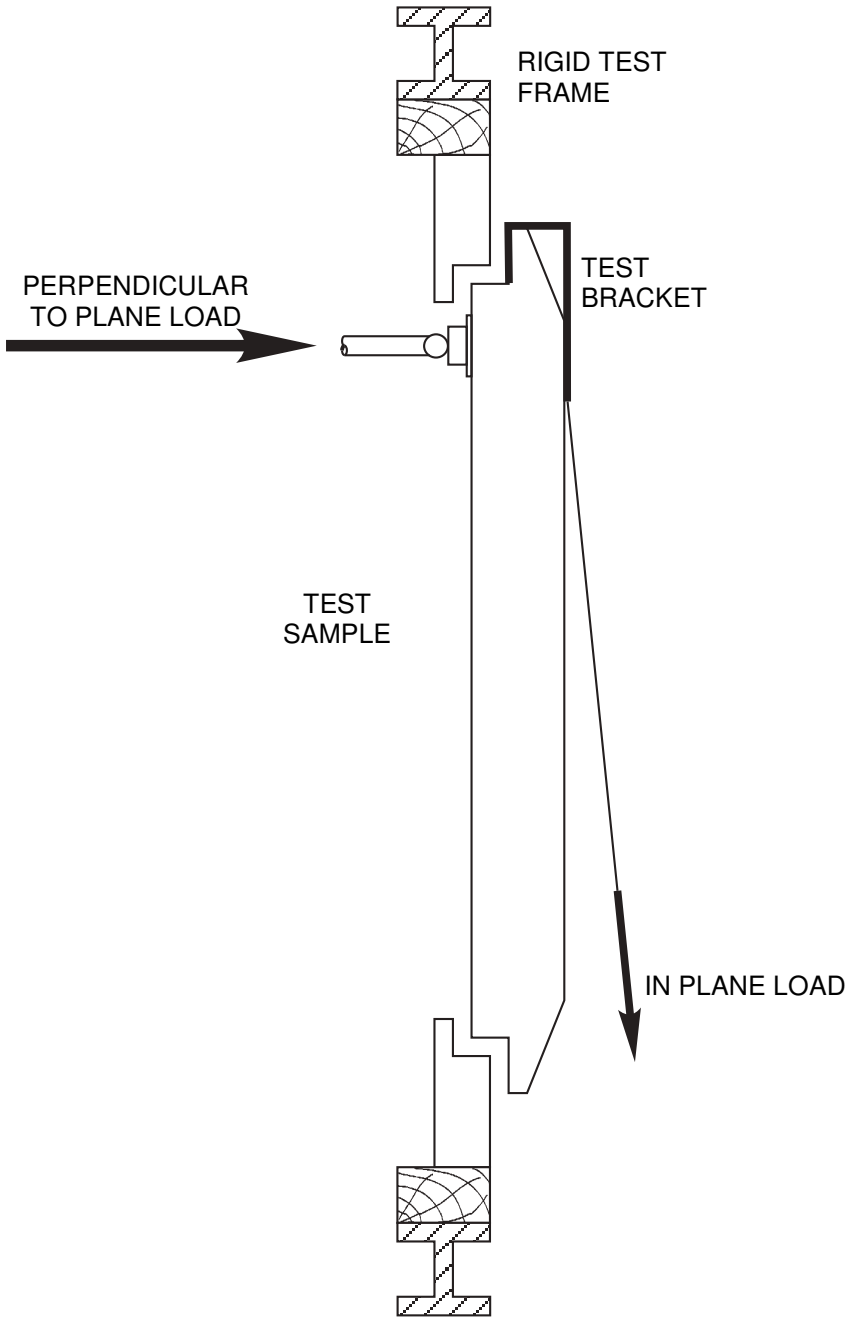
The test was carried out using the tools described in Annex A.7.2 in accordance with the procedures detailed in Annex A.7.3.

No alternative method of entry could be effected Pass

**Annex A.8 Additional mechanical loading test**

Not applicable as an alternative method of entry was not identified under Annex A.7.

**APPENDIX A**

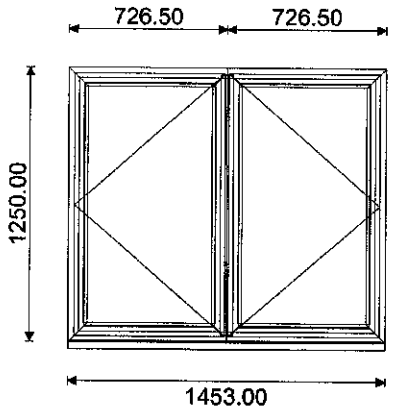

RIGID TEST
FRAME
TEST
BRACKET
PERPENDICULAR
TO PLANE LOAD
TEST
SAMPLE
IN PLANE LOAD

# APPENDIX B

2

## Casemen

ETC317: Outer Frame
ETC424: Vent
ETC335: Mullion
ETC157: Cill
NONE: Head Extension




| QUALITY CONTROL |
|---|
| Approved |
| Cut |
| Fabricated |
| Checked |
| Glazed |

1,453 mm x 1,275 mm

| *Extrusions* | | *End Prep* | | *Qty* | *Total* | *Length* | *Status* |
|---|---|---|---|---|---|---|---|
| ETC157 | Cill - 150mm SubCill | 0.0T | 0.0T | 1 | 2 | 1,453 mm | [ ] |
| ETC162 | Bead - 24mm (ALI47) Square | 0.0T | 0.0T | 4 | 8 | 600 mm | [ ] |
| ETC162 | Bead - 24mm (ALI47) Square | 0.0T | 0.0T | 4 | 8 | 1,075 mm | [ ] |
| ETC317 | Square Outerframe for Standard Stays | 45.0T | 45.0T | 2 | 4 | 1,250 mm | [ ] |
| ETC317 | Square Outerframe for Standard Stays | 45.0T | 45.0T | 2 | 4 | 1,453 mm | [ ] |
| ETC335 | Wide Transom/Mullion for STD Stays | 0.0T | 0.0T | 1 | 2 | 1,185 mm | [ ] |
| ETC424 | Internally Beaded Square Vent Frame | 45.0T | 45.0T | 4 | 8 | 692 mm | [ ] |
| ETC424 | Internally Beaded Square Vent Frame | 45.0T | 45.0T | 4 | 8 | 1,197 mm | [ ] |

| *Glazing* | | *Qty* | *Total* | *Width* | *Height* | |
|---|---|---|---|---|---|---|
| 28MM | 28mm Glazing | 2 | 4 | 593 mm | x 1,098 | [ ] |

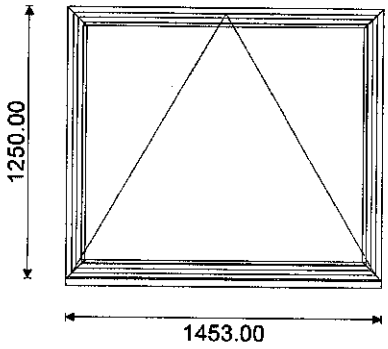
| *Components* | | *Qty* | *Total* | *Unit* | |
|---|---|---|---|---|---|
| ACET012 | CornerCleat (Crimping cleat) | 4 | 8 | Each | [ ] |
| ACET044 | Chevron S/S (for 55) | 8 | 16 | Each | [ ] |
| ACET045 | Chevron S/S (for 47) | 8 | 16 | Each | [ ] |
| ACET062 | Screws (for Cills) No.10 x 2 CskSS STap | 6 | 12 | Each | [ ] |
| ACET064 | Screws (for Handles) No. 8 X5/8 Csk Hd. | 24 | 48 | Each | [ ] |
| ACET066 | Screws No. 7 x 1.5 Csk head S/S | 6 | 12 | Each | [ ] |
| ACET069 | Screws (for ACET081) | 4 | 8 | Each | [ ] |
| ACET070 | 8X 1/2 " Pozi Flange S.S. Self Tapping | 24 | 48 | Each | [ ] |
| ACET074 | CornerCleat (Crimping for 47 Internal) | 8 | 16 | Each | [ ] |
| ACET125 | Anti Twist Clip | 2 | 4 | Each | [ ] |
| ACET157WP | Cill end cap | 1 | 2 | Each | [ ] |
| ACET165WPL | Espag Handle Left - White | 1 | 2 | Each | [ ] |
| ACET165WPR | Espag Handle Right - White | 1 | 2 | Each | [ ] |
| ACET180 | Alitherm 47 - Run up block for direct fix to | 4 | 8 | Each | [ ] |
| ACET304L | Espag' | 1 | 2 | Each | [ ] |
| ACET304R | Espag' | 1 | 2 | Each | [ ] |
| ACET310 | Cleat for ETC310 316 317 | 4 | 8 | Each | [ ] |
| ACET335 | PVC Transom Locator Block for ETC335 | 2 | 4 | Each | [ ] |
| ACET380 | Run Up Block | 2 | 4 | Each | [ ] |
| ACET394 | Keep Packer | 4 | 8 | Each | [ ] |
| ACINDSSH16 | 16" SH. Standard Hinge | 2 | 4 | Each | [ ] |
| ACVG31 | Gasket - E Gasket 3mm | 7 | 14 | Each | [ ] |
| ACVG34 | Gasket - Wedge Gasket 5mm | 7 | 14 | Each | [ ] |
| ACVL032 | Gasket - Small Flipper | 15 | 30 | Each | [ ] |
| ACW20024 | Stainless Steel Chevron | 8 | 16 | Each | [ ] |
| HINGE PROTEC | Hinge Protectors (Pr) | 4 | 8 | Each | [ ] |

## APPENDIX B (CONTINUED)

1

# Casemen

ETC317: Outer Frame
ETC424: Vent
ETC157: Cill




| QUALITY CONTROL |
|---|
| Approved |
| Cut |
| Fabricated |
| Checked |
| Glazed |

1,453 mm x 1,275 mm

| *Extrusions* | | *End Prep* | | *Qty* | *Total* | *Length* | *Status* |
|---|---|---|---|---|---|---|---|
| **ETC157** | Cill - 150mm SubCill | 0.0T | 0.0T | 1 | 2 | 1,453 mm | [ ] |
| **ETC162** | Bead - 24mm (ALI47) Square | 0.0T | 0.0T | 2 | 4 | 1,075 mm | [ ] |
| **ETC162** | Bead - 24mm (ALI47) Square | 0.0T | 0.0T | 2 | 4 | 1,308 mm | [ ] |
| **ETC317** | Square Outerframe for Standard Stays | 45.0T | 45.0T | 2 | 4 | 1,250 mm | [ ] |
| **ETC317** | Square Outerframe for Standard Stays | 45.0T | 45.0T | 2 | 4 | 1,453 mm | [ ] |
| **ETC424** | Internally Beaded Square Vent Frame | 45.0T | 45.0T | 2 | 4 | 1,197 mm | [ ] |
| **ETC424** | Internally Beaded Square Vent Frame | 45.0T | 45.0T | 2 | 4 | 1,400 mm | [ ] |

| *Glazing* | | *Qty* | *Total* | *Width* | *Height* | |
|---|---|---|---|---|---|---|
| **28MM** | 28mm Glazing | 1 | 2 | 1,301 | x 1,098 | [ ] |

| *Components* | | *Qty* | *Total* | *Unit* | |
|---|---|---|---|---|---|
| **ACET012** | CornerCleat (Crimping cleat) | 4 | 8 | Each | [ ] |
| **ACET044** | Chevron S/S (for 55) | 4 | 8 | Each | [ ] |
| **ACET045** | Chevron S/S (for 47) | 8 | 16 | Each | [ ] |
| **ACET062** | Screws (for Cills) No.10 x 2 CskSS STap | 6 | 12 | Each | [ ] |
| **ACET069** | Screws (for ACET081) | 2 | 4 | Each | [ ] |
| **ACET070** | 8X 1/2 " Pozi Flange S.S. Self Tapping | 12 | 24 | Each | [ ] |
| **ACET074** | CornerCleat (Crimping for 47 Internal) | 4 | 8 | Each | [ ] |
| **ACET157WP** | Cill end cap | 1 | 2 | Each | [ ] |
| **ACET165WPR** | Espag Handle Right - White | 1 | 2 | Each | [ ] |
| **ACET180** | Alitherm 47 - Run up block for direct fix to | 2 | 4 | Each | [ ] |
| **ACET305R** | Espag' | 1 | 2 | Each | [ ] |
| **ACET310** | Cleat for ETC310 316 317 | 4 | 8 | Each | [ ] |
| **ACET380** | Run Up Block | 2 | 4 | Each | [ ] |
| **ACET394** | Keep Packer | 4 | 8 | Each | [ ] |
| **ACINDS24** | 24" Standard Hinge | 1 | 2 | Each | [ ] |
| **ACVG31** | Gasket - E Gasket 3mm | 5 | 10 | Each | [ ] |
| **ACVG34** | Gasket - Wedge Gasket 5mm | 5 | 10 | Each | [ ] |
| **ACVL032** | Gasket - Small Flipper | 10 | 21 | Each | [ ] |
| **ACW20024** | Stainless Steel Chevron | 4 | 8 | Each | [ ] |
| **HINGE PROTEC** | Hinge Protectors (Pr) | 2 | 4 | Each | [ ] |

**END OF REPORT**