



Report No	2370/8029234/ Issue 2	This Report consists of 20 pages
Licence/Certificate No	KM 81580	
Client	Smart Systems Limited Arnolds Way Yatton BS49 4QN	
Authority & date	BSI Service Management Order No 8029234 dated 05 August 2013 - Equipment Record No 10143342	
Items tested	2 off Aluminium Alloy windows, Smart Systems Alitherm 800 Internally/Externally Glazed Casement Window System	
Specification	PAS24:2012 Enhanced security performance requirements for doorsets and windows in the UK External doorsets and windows intended to offer a level of security suitable for dwellings and other buildings exposed to comparable risk Type retesting for Product Certification	
Results	Pass Issue 2 of this Report supersedes all previous issues. The amendment giving rise to this issue of the report can be ascertained by contacting the authorizing signatory	
Prepared by	P Rossington	 (Technician)
Authorized by	M Manito	 (Senior Engineer)
Issue Date	20 August 2013	
Conditions of issue	This Test Report is issued subject to the conditions stated in current issue of CP0322 'Conditions of contract for 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.	

TEST AND EXAMINATION OF TWO ALUMINIUM ALLOY WINDOWS SUBMITTED FOR TYPE RETEST ASSESSMENT, SMART SYSTEMS ALITHERM 800 INTERNALLY/EXTERNALLY GLAZED CASEMENT WINDOW SYSTEM

INTRODUCTION

The Aluminium alloy windows submitted by Smart Systems Limited, detailed below and described on page 4 was tested and assessed to the requirements of PAS24:2012 Enhanced security performance requirements for doorsets and windows, as indicated on the following pages of this Report. This request was made on Service Management Order No 8029234 dated 05 August 2013. It is emphasized that assessments have not been made against the other Clauses of the Specification.

TEST SAMPLE

1 off projecting side hung next to projecting side hung window

(Equipment Record No 10143342)

Date sample received: 29 July 2013

SUMMARY OF RESULTS

- | | | |
|----|--------------------|---|
| 1. | Manipulation | The test sample met the requirements of the Specification in respect of Clause 4.3 |
| 2. | Glazing removal | The test sample met the requirements of the Specification in respect of Clause 4.4 |
| 3. | Mechanical loading | The test sample met the requirements of the Specification in respect of Clause 4.5. |
| 4. | Manual check test | The test sample met the requirements of the Specification in respect of Clause 4.6 |

CLAUSE 2 SAMPLE SELECTION

The sample submitted for tests was selected by the Client on behalf of BSI.

ASSESSMENT

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

CLAUSE 3 TEST APPARATUS AND SAMPLE MOUNTING

The test apparatus used for the manual and mechanical tests is shown in figure 2 of this Report. This apparatus meets the requirements of the Specification. The 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 type -	Projecting side hung next to projecting side hung
Material -	Aluminium Alloy
Construction -	Cleated
Fittings (each sash) -	Friction stays: 16" Securistyle side hung stays Locking: A six point locking (six mushroom bolts) Trojan espagnolette system operated by a key locking handle 7 of run up blocks 2 of pairs of Vector Excluder (ref ACET513) hinge protectors
Glass -	Double glazed, 4-16-4mm toughened glass sealed units
Glazing system -	Internal/External beads, gaskets and securiclips
Sample dimensions -	For information only (nominal sizes) Overall size Length: 1445mm Height: 1355mm Sash sizes Length: 700mm Height: 1320mm

EXAMINATION AND TEST

Sample type – Projecting side hung next to projecting side hung

Date of test – 29 August 2013

Laboratory temperature – 23.0°C

PERFORMANCE REQUIREMENTS

ASSESSMENT

Clause 4.3 Manipulation test

The sample was mounted vertically in the test rig as described in Clause 3.
The test was carried out in accordance with the given objective of this Clause using the tools specified in A.2.1.

The key for the lockable hardware was fully removable.
No entry could be effected within the time allowed.

Pass

Clause 4.4 Infill medium removal test

Clause 4.4.2 Manual test

The sample was mounted vertically in the test rig as described in Clause 3.
The sample was assessed using the tools specified in A.2.1 Group A and A.2.2 Group B

Paint scrapers were used to try to remove the gasket from the exterior face.
No entry gained in 3 minutes

Pass

Clause 4.4.3 Mechanical test

The sample was mounted vertically in the test rig as described in Clause 3.
A perpendicular to plane load of 2.0kN was applied to each corner of the glazing in turn as specified in Clause 4.4.3.

No evidence of bead failure
No entry could be effected

Pass

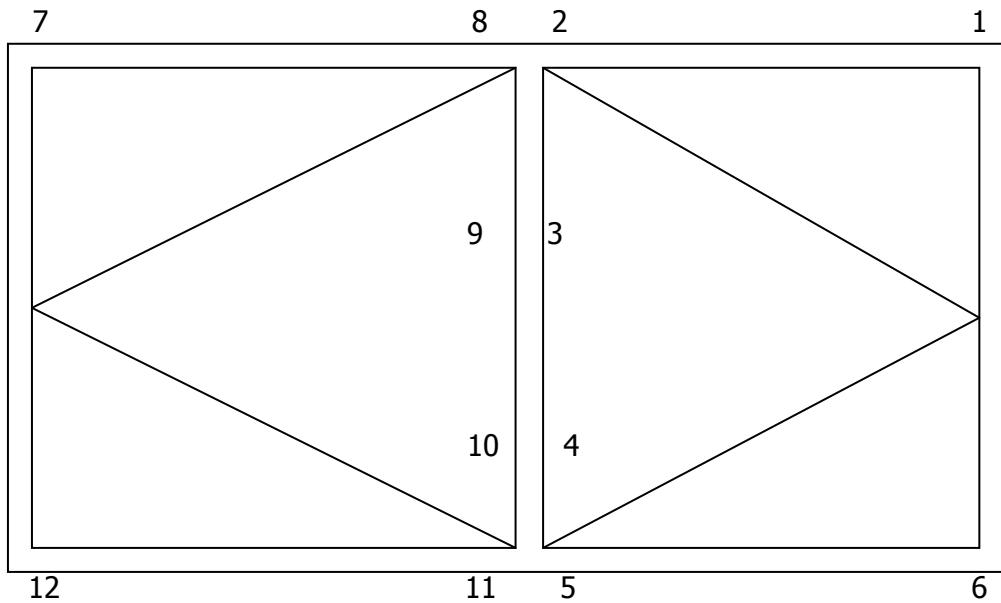
EXAMINATION AND TEST (CONTINUED)

Clause 4.5 Mechanical loading test

The sample was mounted vertically in the test rig as described in Clause 3.

The test was carried out in accordance with the procedures detailed in Clause 4.5.2 using the test apparatus detailed in Clause 3.

Diagram of points of application of loads



B.4.5.2 Loading procedure

Point of application of load (right hand light)

First sequence

1 - Friction stay/Hinge protector (right head)

Standard loading case used: 1/5

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)

B.4.5.2 Loading procedure (continued)

ASSESSMENT

Point of application of load

2 - Corner/Mushroom bolt/Mushroom bolt (mullion head)

Standard loading case used: 3/4

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

3 - 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

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 (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

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 - Corner/Mushroom bolt/Mushroom bolt (mullion sill)

Standard loading case used: 3/4

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

EXAMINATION AND TEST (CONTINUED)

B.4.5.2 Loading procedure (continued)

ASSESSMENT

Point of application of load

6 - Friction stay/Hinge protector (right sill)

Standard loading case used: 1/5

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

Right hand light

No entry effected

Pass

Point of application of load (left hand light)

First sequence

7 - Friction stay/Hinge protector (left head)

Standard loading case used: 1/5

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

8- Corner/Mushroom bolt/Mushroom bolt (mullion head)

Standard loading case used: 3/4

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

EXAMINATION AND TEST (CONTINUED)

B.4.5.2 Loading procedure (continued)

ASSESSMENT

Point of application of load

9 - 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

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

10 - 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

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

11 - Corner/Mushroom bolt/Mushroom bolt (mullion sill)

Standard loading case used: 3/4

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 - Friction stay/Hinge protector (left sill)

Standard loading case used: 1/5

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

Left hand light

No entry effected

Pass

EXAMINATION AND TEST (CONTINUED)

Clause 4.6 Manual Check Test

ASSESSMENT

The sample was mounted vertically in the test rig as described in Clause 3.

The test was carried out using the tools described in B.4.6.2 in accordance with the procedures detailed in C.4.6.2.

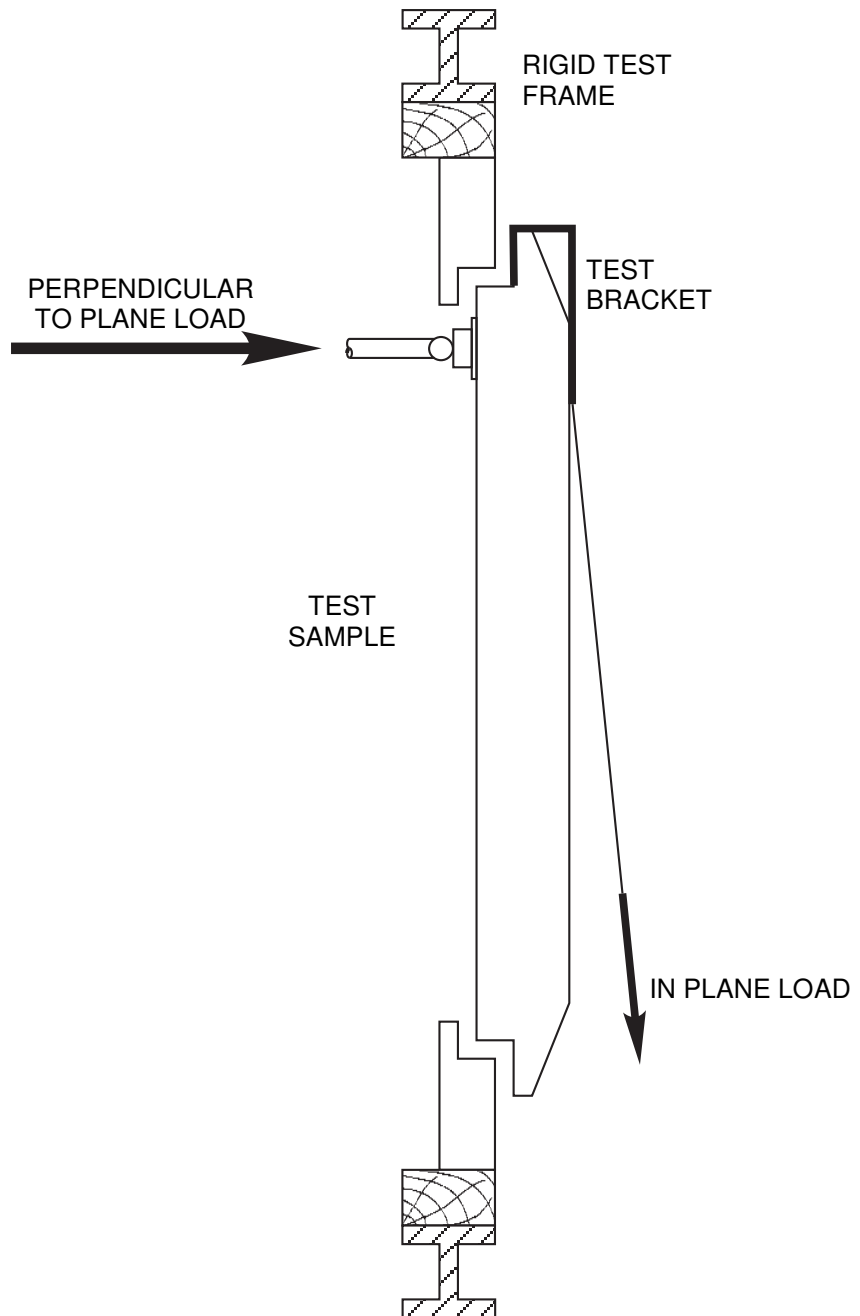
No alternative method of entry could be effected

Pass

Clause 4.7 Additional mechanical loading test

Not applicable as an alternative method of entry was not identified under Clause 4.7.

FIGURE 2



Photos of sample



Appendix B

Alitherm 800 Tests

BSI

2

Item: 1 of 6

Version: 2 | 25/01/2013

Update 14.0 Page 1

WARNING SOFTWARE NEEDS UPDATE Quote

Software last updated 03/07/2012

New update now available from

www.smartsystems.co.uk/v6

Quote: 2 Item: 1 BS6375 Pt 1 & 2 Qty 1

1

QUALITY CONTROL

Approved

Fabricated

Checked

Glazed

2,000 mm x 1,435 mm

ETC811: Outer Frame Cut

ETC824: Vent

ETC831: Mullion/Transom

NONE: Cill

NONE: Head Extension

BS6375 Pt 1 & 2

1435.00

2000.00

721.00 1279.00

Extrusions End Prep Qty Length Status

ETC811 61mm Equal Leg Outer Frame -45.0 -45.0 **2 1,435 mm** []

ETC811 61mm Equal Leg Outer Frame -45.0 -45.0 **2 2,000 mm** []

ETC824 Internally Beaded Flat Vent 45.0T 45.0T **2 699.5 mm** []

ETC824 Internally Beaded Flat Vent 45.0T 45.0T **2 1,400 mm** []

ETC831 Square Transom/Mullion 0.0T 0.0T **1 1,387 mm** []

ETC846 Reverse Adapter 45.0T 45.0T **2 1,251.5 mm** []

ETC846 Reverse Adapter 45.0T 45.0T **2 1,394 mm** []

ETC866 28mm Internal Square Glazing Bead 0.0T 0.0T **2 601.5 mm** []

ETC866 28mm Internal Square Glazing Bead 0.0T 0.0T **2 1,211 mm** []

ETC866 28mm Internal Square Glazing Bead 0.0T 0.0T **2 1,269 mm** []

ETC866 28mm Internal Square Glazing Bead 0.0T 0.0T **2 1,320.5 mm** []

Glazing Qty Width Height

28MM GLAZING 28mm Glazing **1 592.5 mm x 1,293 mm** []

28MM GLAZING 28mm Glazing **1 1,200.5 mm x 1,343 mm** []

Components Qty Unit

ACDV21 Stainless Steel Chevron **44 Each** []

ACET064 Screws (for Handles) No. 8 X5/8 Csk Hd. **1122 Each** []

ACET066 Screws No. 7 x 1.5 Csk head S/S s/tapping screw **44 Each** []

ACET069 Screws (for ACET081) **22 Each** []

ACET070 8X 1/2 " Pozi Flange S.S. Self Tapping Screws **66 Each** []

ACET099 8 X 3/4 Pozi Flange S/S Self Tapper **66 Each** []

ACET122 M4 MC.Screw x 10mm C/S **44 Each** []

ACET131WP Drain Hole Cover [White] **44 Each** []

ACET165WPR Espag Handle Right - White **11 Each** []

ACET290 20mm Polyamide Screw **88 Each** []

Alith 800 Tests

BSI

2

Item: 1 of 6

Version: 2 | 25/01/2013

Update 14.0 Page 2

WARNING SOFTWARE NEEDS UPDATE Quote

Software last updated 03/07/2012

New update now available from

www.smartsystems.co.uk/v6

ACET621 CHEVRON FOR ETC621/846 **44 Each** []

ACET811 Outer Crimp Cleat for ETC810,811,821 **44 Each** []

ACET813 Outer Crimp Cleat for ETC811,821 **44 Each** []

ACET820 Inner Crimp Cleat for ETC820,822,824 **44 Each** []

ACET824 CHEVRON S/S FOR ETC 324/820/821/824 **44 Each** []

ACET826 Outer Crimp Cleat for ETC824 **44 Each** []

ACET832 Transom/Mullion Fixing Block **22 Each** []

ACET836 Flipper Gasket for ali300 **44 Each** []

ACET838 Long Tail Flipper Gasket **44 Each** []

ACET842 Low Line Gasket Captive for ali300 **99 Each** []

ACET846 Outer Crimp Cleat for ETC846 **44 Each** []

ACET84R8 TROJAN SHOOTBOLT SASH REBATE 945/1400 R/H **11 Each** []

ACET855 Insulation **1166 Each** []

ACET857 Bridge Packer **44 Each** []

ACET880WP Run Up Block - White **11 Each** []

ACINDSSH16 16" SH. Standard Hinge **11 Each** []

ACW20034 4mm Wedge Gasket **99 Each** []

WCA106SSZ Aluminium Corner Chevron (ETC105) **88 Each** []

Quoted By: -

Estimating Software by Smarts Architectural Aluminium (c) 2008

Report Name: FabSumShort_Rev12.0

Alith 800 Tests

BSI

2

Item: 2 of 6

Version: 2 | 25/01/2013

Update 14.0 Page 3

WARNING SOFTWARE NEEDS UPDATE Quote

Software last updated 03/07/2012

New update now available from

www.smartsystems.co.uk/v6

Quote: **2** Item: **2 BS6375 Pt 1 & 2 Qty 2**

2

QUALITY CONTROL

Approved

Fabricated

Checked

Glazed

1,435 mm x 1,335 mm

ETC811: Outer Frame Cut

ETC824: Vent

ETC831: Mullion/Transom

NONE: Cill

NONE: Head Extension

BS6375 Pt 1 & 2

1335.00

1435.00

Extrusions End Prep Qty Total Length Status

ETC811 61mm Equal Leg Outer Frame -45.0 -45.0 **2 4 1,335 mm []**
ETC811 61mm Equal Leg Outer Frame -45.0 -45.0 **2 4 1,435 mm []**
ETC824 Internally Beaded Flat Vent 45.0T 45.0T **2 4 1,300 mm []**
ETC824 Internally Beaded Flat Vent 45.0T 45.0T **2 4 1,400 mm []**
ETC866 28mm Internal Square Glazing Bead 0.0T 0.0T **2 4 1,169 mm []**
ETC866 28mm Internal Square Glazing Bead 0.0T 0.0T **2 4 1,302 mm []**

Glazing Qty Total Width Height

28MM GLAZING 28mm Glazing **1 2 1,293 mm x 1,193 mm []**

Components Qty Total Unit

ACDV21 Stainless Steel Chevron **4 88 Each []**
ACET064 Screws (for Handles) No. 8 X5/8 Csk Hd. **12 2244 Each []**
ACET069 Screws (for ACET081) **2 44 Each []**
ACET070 8X 1/2 " Pozi Flange S.S. Self Tapping Screws **6 1122 Each []**
ACET099 8 X 3/4 Pozi Flange S/S Self Tapper **6 1122 Each []**
ACET131WP Drain Hole Cover [White] **4 88 Each []**
ACET165WPR Espag Handle Right - White **1 22 Each []**
ACET290 20mm Polyamide Screw **8 1166 Each []**
ACET811 Outer Crimp Cleat for ETC810,811,821 **4 88 Each []**
ACET813 Outer Crimp Cleat for ETC811,821 **4 88 Each []**
ACET820 Inner Crimp Cleat for ETC820,822,824 **4 88 Each []**
ACET824 CHEVRON S/S FOR ETC 324/820/821/824 **4 88 Each []**
ACET826 Outer Crimp Cleat for ETC824 **4 88 Each []**
ACET836 Flipper Gasket for ali300 **5 1111 Each []**
ACET838 Long Tail Flipper Gasket **5 1111 Each []**
ACET842 Low Line Gasket Captive for ali300 **5 1100 Each []**

Quoted By: -

Estimating Software by Smarts Architectural Aluminium (c) 2008
Report Name: FabSumShort_Rev12.0

Alith 800 Tests

BSI

2

Item: 2 of 6

Version: 2 | 25/01/2013

Update 14.0 Page 4

WARNING SOFTWARE NEEDS UPDATE Quote

Software last updated 03/07/2012

New update now available from

www.smartsystems.co.uk/v6

ACET84R8 TROJAN SHOOTBOLT SASH REBATE 945/1400 R/H **1 22 Each []**

ACET855 Insulation **11 2211 Each []**

ACET857 Bridge Packer **2 44 Each []**

ACET880WP Run Up Block - White **2 44 Each []**

ACINDS24 24" Standard Hinge **1 22 Each []**

ACW20034 4mm Wedge Gasket **5 1100 Each []**

WCA106SSZ Aluminium Corner Chevron (ETC105) **4 88 Each []**

Quoted By: -

Estimating Software by Smarts Architectural Aluminium (c) 2008
Report Name: FabSumShort_Rev12.0

Alith 800 Tests

BSI

2

Item: 3 of 6

Version: 2 | 25/01/2013

Update 14.0 Page 5

WARNING SOFTWARE NEEDS UPDATE Quote

Software last updated 03/07/2012

New update now available from

www.smartsystems.co.uk/v6

Quote: **2** Item: **3 PAS 24 2012 Qty 1**

3

QUALITY CONTROL

Approved
Fabricated
Checked
Glazed

1,442 mm x 1,435 mm

ETC811: Outer Frame Cut

ETC822: Vent

ETC831: Mullion/Transom

NONE: Cill

NONE: Head Extension

PAS 24 2012

1435.00

1442.00

721.00 721.00

Extrusions End Prep Qty Length Status

ETC811 61mm Equal Leg Outer Frame -45.0 -45.0 **2 1,435 mm** []

ETC811 61mm Equal Leg Outer Frame -45.0 -45.0 **2 1,442 mm** []

ETC822 Externally Beaded Shootbolt Vent 45.0T 45.0T **4 699.5 mm** []

ETC822 Externally Beaded Shootbolt Vent 45.0T 45.0T **4 1,400 mm** []

ETC831 Square Transom/Mullion 0.0T 0.0T **1 1,387 mm** []

ETC861 28mm Square Glazing Bead 0.0T 0.0T **4 622 mm** []

ETC861 28mm Square Glazing Bead 0.0T 0.0T **4 1,289.5 mm** []

Glazing Qty Width Height

24MM GLAZING 24mm Glazing **2 612 mm x 1,312.5 m**[m]

Components Qty Unit

ACDV21 Stainless Steel Chevron **44 Each** []

ACET045 Chevron S/S (for 47) **88 Each** []

ACET064 Screws (for Handles) No. 8 X5/8 Csk Hd. **2244 Each** []

ACET066 Screws No. 7 x 1.5 Csk head S/S s/tapping screw **44 Each** []

ACET069 Screws (for ACET081) **44 Each** []

ACET070 8X 1/2 " Pozi Flange S.S. Self Tapping Screws **1122 Each** []

ACET099 8 X 3/4 Pozi Flange S/S Self Tapper **1122 Each** []

ACET122 M4 MC.Screw x 10mm C/S **44 Each** []

ACET131WP Drain Hole Cover [White] **66 Each** []

ACET165WPL Espag Handle Left - White **11 Each** []

ACET165WPR Espag Handle Right - White **11 Each** []

ACET290 20mm Polyamide Screw **1166 Each** []

ACET811 Outer Crimp Cleat for ETC810,811,821 **44 Each** []

ACET813 Outer Crimp Cleat for ETC811,821 **44 Each** []

ACET820 Inner Crimp Cleat for ETC820,822,824 **88 Each** []

Quoted By: -

Estimating Software by Smarts Architectural Aluminium (c) 2008

Report Name: FabSumShort_Rev12.0

Alith 800 Tests

BSI

2

Item: 3 of 6

Version: 2 25/01/2013

Update 14.0 Page 6

WARNING SOFTWARE NEEDS UPDATE Quote

Software last updated 03/07/2012

New update now available from

www.smartsystems.co.uk/v6

ACET825 Outer Crimp Cleat for ETC822 **88 Each** []

ACET827 Stainless Steel Chevron for ETC822 **88 Each** []

ACET832 Transom/Mullion Fixing Block **22 Each** []

ACET834 Long Wedge Gasket (Ali 800) **88 Each** []

ACET835 Gasket Captive for ali300 **88 Each** []

ACET836 Flipper Gasket for ali300 **88 Each** []

ACET838 Long Tail Flipper Gasket **88 Each** []

ACET84L8 TROJAN SHOOTBOLT SASH REBATE 945/1400 L/H **11 Each** []

ACET84R8 TROJAN SHOOTBOLT SASH REBATE 945/1400 R/H **11 Each []**

ACET855 Insulation **1144 Each []**

ACET857 Bridge Packer **44 Each []**

ACET880WP Run Up Block - White **22 Each []**

ACINDSSH16 16" SH. Standard Hinge **22 Each []**

Quoted By: -

Estimating Software by Smarts Architectural Aluminium (c) 2008

Report Name: FabSumShort_Rev12.0

Alith 800 Tests

BSI

2

Item: 4 of 6

Version: 2 | 25/01/2013

Update 14.0 Page 7

WARNING SOFTWARE NEEDS UPDATE Quote

Software last updated 03/07/2012

New update now available from

www.smartsystems.co.uk/v6

Quote: **2** Item: **4 PAS 24 2012 Qty 1**

4

QUALITY CONTROL

Approved

Fabricated

Checked

Glazed

1,435 mm x 1,335 mm

ETC811: Outer Frame Cut

ETC822: Vent

ETC831: Mullion/Transom

NONE: Cill

NONE: Head Extension

PAS 24 2012

1335.00

1435.00

Extrusions End Prep Qty Length Status

ETC811 61mm Equal Leg Outer Frame -45.0 -45.0 **2 1,335 mm []**

ETC811 61mm Equal Leg Outer Frame -45.0 -45.0 **2 1,435 mm []**

ETC822 Externally Beaded Shootbolt Vent 45.0T 45.0T **2 1,300 mm []**

ETC822 Externally Beaded Shootbolt Vent 45.0T 45.0T **2 1,400 mm []**

ETC861 28mm Square Glazing Bead 0.0T 0.0T **2 1,189.5 mm []**

ETC861 28mm Square Glazing Bead 0.0T 0.0T **2 1,322.5 mm []**

Glazing Qty Width Height

24MM GLAZING 24mm Glazing **1 1,312.5 mm x 1,212.5 m[m]**

Components Qty Unit

ACDV21 Stainless Steel Chevron **44 Each []**

ACET045 Chevron S/S (for 47) **44 Each []**

ACET064 Screws (for Handles) No. 8 X5/8 Csk Hd. **1122 Each []**

ACET069 Screws (for ACET081) **22 Each []**

ACET070 8X 1/2 " Pozi Flange S.S. Self Tapping Screws **66 Each []**

ACET099 8 X 3/4 Pozi Flange S/S Self Tapper **66 Each []**

ACET131WP Drain Hole Cover [White] **44 Each []**

ACET165WPR Espag Handle Right - White **11 Each []**

ACET290 20mm Polyamide Screw **88 Each []**

ACET811 Outer Crimp Cleat for ETC810,811,821 **44 Each []**

ACET813 Outer Crimp Cleat for ETC811,821 **44 Each []**

ACET820 Inner Crimp Cleat for ETC820,822,824 **44 Each []**

ACET825 Outer Crimp Cleat for ETC822 **44 Each []**

ACET827 Stainless Steel Chevron for ETC822 **44 Each []**

ACET834 Long Wedge Gasket (Ali 800) **55 Each []**

ACET835 Gasket Captive for ali300 **55 Each []**

Quoted By: -

Estimating Software by Smarts Architectural Aluminium (c) 2008

Report Name: FabSumShort_Rev12.0

Alith 800 Tests

BSI

2

Item: 4 of 6

Version: 2 | 25/01/2013

Update 14.0 Page 8

WARNING SOFTWARE NEEDS UPDATE Quote

Software last updated 03/07/2012

New update now available from

www.smartsystems.co.uk/v6

ACET836 Flipper Gasket for ali300 **55 Each** []

ACET838 Long Tail Flipper Gasket **55 Each** []

ACET84R8 TROJAN SHOOTBOLT SASH REBATE 945/1400 R/H **11 Each** []

ACET855 Insulation **1111 Each** []

ACET857 Bridge Packer **22 Each** []

ACET880WP Run Up Block - White **22 Each** []

ACINDS24 24" Standard Hinge **11 Each** []

Quoted By: -

Estimating Software by Smarts Architectural Aluminium (c) 2008

Report Name: FabSumShort_Rev12.0

Alith 800 Tests

BSI

2

Item: 5 of 6

Version: 2 | 25/01/2013

Update 14.0 Page 9

WARNING SOFTWARE NEEDS UPDATE Quote

Software last updated 03/07/2012

New update now available from

www.smartsystems.co.uk/v6

Quote: **2** Item: **5 PAS 24 2012 Qty 1**

5

QUALITY CONTROL

Approved

Fabricated

Checked

Glazed

1,500 mm x 1,500 mm

ETC811: Outer Frame Cut

ETC822: Vent

ETC831: Mullion/Transom

NONE: Cill

NONE: Head Extension

PAS 24 2012

1500.00

1500.00

Extrusions End Prep Qty Length Status

ETC811 61mm Equal Leg Outer Frame -45.0 -45.0 **4 1,500 mm** []

ETC864 24mm Square Glazing Bead 0.0T 0.0T **2 1,419 mm** []

ETC864 24mm Square Glazing Bead 0.0T 0.0T **2 1,452 mm** []

Glazing Qty Width Height

24MM GLAZING 24mm Glazing **1 1,442 mm x 1,442 mm** []

Components Qty Unit

ACDV21 Stainless Steel Chevron **44 Each** []

ACET131WP Drain Hole Cover [White] **22 Each** []

ACET811 Outer Crimp Cleat for ETC810,811,821 **44 Each** []

ACET813 Outer Crimp Cleat for ETC811,821 **44 Each** []

ACET834 Long Wedge Gasket (Ali 800) **66 Each** []

ACET835 Gasket Captive for ali300 **66 Each** []

ACET855 Insulation **1122 Each** []

ACET857 Bridge Packer **22 Each** []

Quoted By: -

Estimating Software by Smarts Architectural Aluminium (c) 2008
Report Name: FabSumShort_Rev12.0

Alith 800 Tests

BSI

2

Item: 6 of 6

Version: 2 | 25/01/2013

Update 14.0 Page 10

WARNING SOFTWARE NEEDS UPDATE Quote

Software last updated 03/07/2012

New update now available from

www.smartsystems.co.uk/v6

Quote: **2** Item: **6 PAS 24 2012 Back up Qty 1**

6

QUALITY CONTROL

Approved

Fabricated

Checked

Glazed

1,442 mm x 1,435 mm

ETC810: Outer Frame Cut

ETC822: Vent

ETC830: Mullion/Transom

NONE: Cill

NONE: Head Extension

PAS 24 2012 Back up

1435.00

1442.00

721.00 721.00

Extrusions End Prep Qty Length Status

ETC810 70mm Equal Leg Outer Frame 45.0T 45.0T **2 1,435 mm** []

ETC810 70mm Equal Leg Outer Frame 45.0T 45.0T **2 1,442 mm** []

ETC822 Externally Beaded Shootbolt Vent 45.0T 45.0T **4 699.5 mm** []

ETC822 Externally Beaded Shootbolt Vent 45.0T 45.0T **4 1,400 mm** []

ETC830 Transom/Mullion 0.0T 0.0T **1 1,387 mm** []

ETC861 28mm Square Glazing Bead 0.0T 0.0T **4 622 mm** []

ETC861 28mm Square Glazing Bead 0.0T 0.0T **4 1,289.5 mm** []

Glazing Qty Width Height

24MM GLAZING 24mm Glazing **2 612 mm x 1,312.5 m**[m]

Components Qty Unit

ACDV21 Stainless Steel Chevron **44 Each** []

ACET045 Chevron S/S (for 47) **88 Each** []

ACET064 Screws (for Handles) No. 8 X5/8 Csk Hd. **2244 Each** []

ACET066 Screws No. 7 x 1.5 Csk head S/S s/tapping screw **22 Each** []

ACET069 Screws (for ACET081) **44 Each** []

ACET070 8X 1/2 " Pozi Flange S.S. Self Tapping Screws **1122 Each** []

ACET099 8 X 3/4 Pozi Flange S/S Self Tapper **1122 Each** []

ACET131WP Drain Hole Cover [White] **66 Each** []

ACET165WPL Espag Handle Left - White **11 Each** []

ACET165WPR Espag Handle Right - White **11 Each** []

ACET290 20mm Polyamide Screw **1166 Each** []

ACET810 Inner Crimp Cleat for ETC810 **44 Each** []

ACET811 Outer Crimp Cleat for ETC810,811,821 **44 Each** []

ACET820 Inner Crimp Cleat for ETC820,822,824 **88 Each** []

ACET825 Outer Crimp Cleat for ETC822 **88 Each** []

Quoted By: -

Estimating Software by Smarts Architectural Aluminium (c) 2008

Report Name: FabSumShort_Rev12.0

Alith 800 Tests

BSI

2

Item: 6 of 6

Version: 2 | 25/01/2013

Update 14.0 Page 11

WARNING SOFTWARE NEEDS UPDATE Quote

Software last updated 03/07/2012

New update now available from

www.smartsystems.co.uk/v6

ACET827 Stainless Steel Chevron for ETC822 **88 Each** []

ACET834 Long Wedge Gasket (Ali 800) **88 Each** []

ACET835 Gasket Captive for ali300 **88 Each** []

ACET836 Flipper Gasket for ali300 **88 Each** []

ACET838 Long Tail Flipper Gasket **88 Each** []

ACET84L8 TROJAN SHOOTBOLT SASH REBATE 945/1400 L/H **11 Each** []

ACET84R8 TROJAN SHOOTBOLT SASH REBATE 945/1400 R/H **11 Each** []

ACET855 Insulation **1144 Each** []

ACET857 Bridge Packer **44 Each** []

ACET880WP Run Up Block - White **22 Each** []

ACINDSSH16 16" SH. Standard Hinge **22 Each** []

MUA067SSZ NO 7x2 CSK HD S.S.S/T Screw **22 Each** []

Quoted By: -

Estimating Software by Smarts Architectural Aluminium (c) 2008

Report Name: FabSumShort_Rev12.0

END OF REPORT