



**A Z U M A**  
Design



## AS5039 TEST REPORT

### Sliding Door

**Azuma Design Pty Ltd**

Address: 52 Justin Street Smithfield NSW 2164 Australia PH: 61(02)9604 0255

**AZUMA TESTING REPORT #AZT0222.13**

**SLIDING SECURITY SCREEN DOOR**

Manufactured By: The Australian Trellis Door Co.

Tested By: Nathan Olsen Date: 1<sup>st</sup> August 2013

Certified By: Nathan Olsen Date: 1<sup>st</sup> August 2013

Witnessed By: Rob Irwin Date: 1<sup>st</sup> August 2013

**Details of Door Infill**

Manufactured By: The Australian Trellis Door Co.

Type: II

**Details of Test Door**

Sample Identification: S06 Trellis Door

Size: 2200mm width x 2200mm height

Gap between Door and Mounting Frame Lock Side (mm): Rebate in jamb

Type of Material Used in Mounting Frame: Aluminium

Constructional Description of Test Door: Expandable security door mesh mounted via hanging roller track system and guided in sill via removable track. Locked together in RH jamb via "slam lock" system consisting of two slave lock hook type mechanisms.

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**AZUMA TESTING REPORT #AZT0222.13**

**SLIDING SECURITY SCREEN DOOR**

**Dynamic Impact Test**

Check weight of Impact bag: 44.09 kilograms

Drop Height of Impact bag for 100 J blow: (using formula  $\frac{10204}{w} = h$ )

w = weight of bag in kilograms

h = drop height in millimeters

**Observations**

Standard: 3mm

Impact 1: 12mm

Impact 2: 15mm

Impact 3: 17mm

Impact 4: 20mm

Impact 5: 22mm

**Result:** PASSED

Remarks: The test sample satisfied the requirements of the standard.

**Azuma Design Pty Ltd**

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AZUMA TESTING REPORT #AZT0222.13

**SLIDING SECURITY SCREEN DOOR**

**Lock and Hinge Lever Test**

LOCATION	PASS	FAIL	FORCE (N)	REMARKS
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TOP LOCK Stage 1	√		47.5	Jamb peeled back.
TOP LOCK Stage 2	√		1663.7	All lock points remained engaged at 160° rotation.
BOTTOM LOCK Stage 1	√		68	Jamb peeled back.
BOTTOM LOCK Stage 2	√		1549	All lock points remained engaged at 160° rotation.

**Result:** PASSED

**Remarks:** The test sample satisfied the requirements of the standard.

**Note:** Please see jemmy test reports on following pages for further detail.

**Azuma Design Pty Ltd**

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**AZUMA TESTING REPORT #AZT0222.13**

AZT No: AZT0222.13

Date of Test: 1st August 2013

Australian Standard: AS 5039

Customer: The Australian Trellis Company

Product Tested: Top lock stage 1

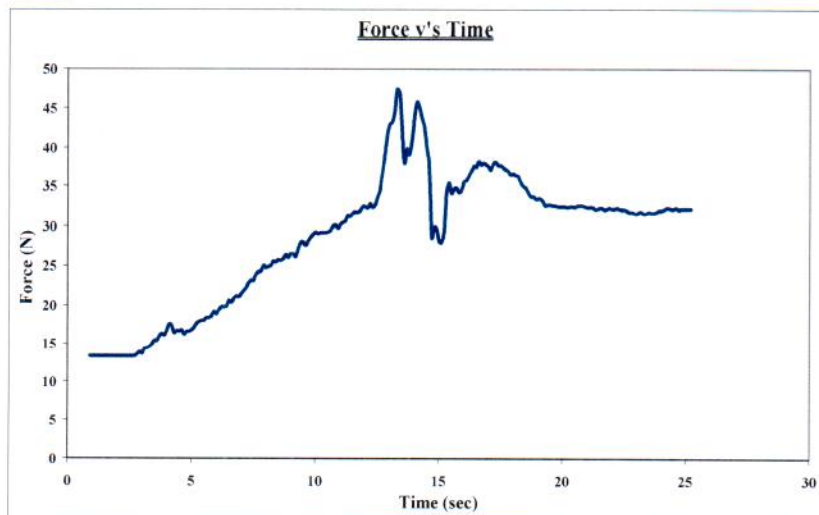
Description of Test: Mount test specimen into security door test rig. Set up Azuma jemmy test apparatus as specified by AS5041. Attach Azuma force gauge to winch cable and connect to lap top. Wind winch until failure or 90 degrees rotation has been achieved by apparatus. Record results of test.

Test Equipment Used: Azuma security door and window grille test rig  
Azuma jemmy test apparatus and winch  
Azuma force gauge and readout  
Azuma lap top

Result Pass or Fail: PASS

Maximum Force Achieved: 47.5 N

Graph



Tested by: Nathan Olsen Date: 1st August 2013

Signatory Signature: N. O.

Signatory Name: Nathan Olsen

**Azuma Design Pty Ltd**

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**AZUMA TESTING REPORT #AZT0222.13**

**AZT No:** AZT0222.13

**Date of Test:** 1st August 2013

**Australian Standard:** AS 5039

**Customer:** The Australian Trellis Company

**Product Tested:** Top lock stage 2

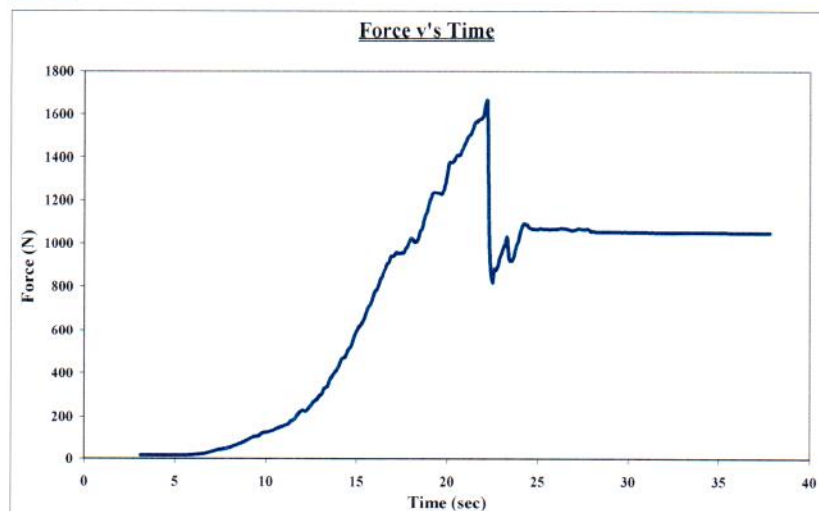
**Description of Test:** As per stage 1 test, wind winch until failure or 160 degrees rotation has been achieved by apparatus.

**Test Equipment Used:** Azuma security door and window grille test rig  
Azuma jemmy test apparatus and winch  
Azuma force gauge and readout  
Azuma lap top


**Result Pass or Fail:** PASS

**Maximum Force Achieved:** 1663.7 N

**Graph**



**Tested by:** Nathan Olsen **Date:** 1st August 2013

**Signatory Signature:** 

**Signatory Name:** Nathan Olsen

**Azuma Design Pty Ltd**

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**AZUMA TESTING REPORT #AZT0222.13**

AZT No: AZT0222.13

Date of Test: 1st August 2013

Australian Standard: AS 5039

Customer: The Australian Trellis Company

Product Tested: Bottom lock stage 1

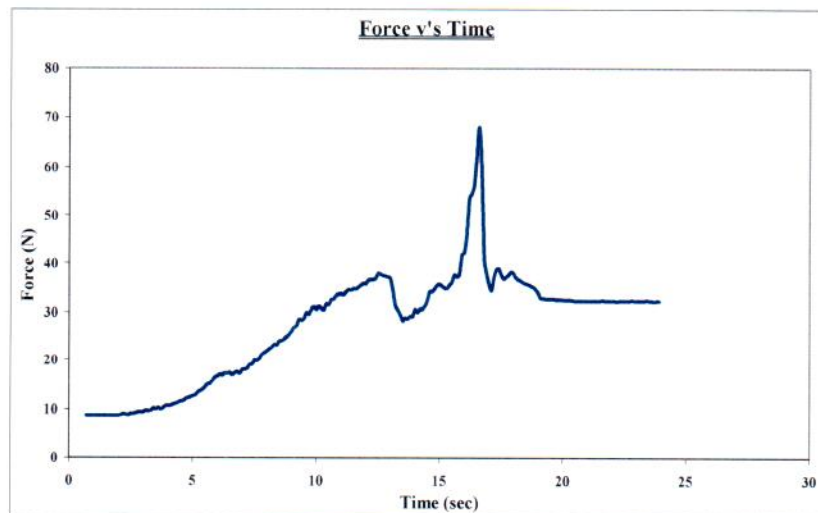
Description of Test: Mount test specimen into security door test rig. Set up Azuma jemmy test apparatus as specified by AS5041. Attach Azuma force gauge to winch cable and connect to lap top. Wind winch until failure or 90 degrees rotation has been achieved by apparatus. Record results of test.

Test Equipment Used: Azuma security door and window grille test rig  
Azuma jemmy test apparatus and winch  
Azuma force gauge and readout  
Azuma lap top

Result Pass or Fail: PASS

Maximum Force Achieved: 68 N

Graph



Tested by: Nathan Olsen Date: 1st August 2013

Signatory Signature: Nathan Olsen

Signatory Name: Nathan Olsen

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**AZUMA TESTING REPORT #AZT0222.13**

**AZT No:** AZT0222.13

**Date of Test:** 1st August 2013

**Australian Standard:** AS 5039

**Customer:** The Australian Trellis Company

**Product Tested:** Bottom lock stage 2

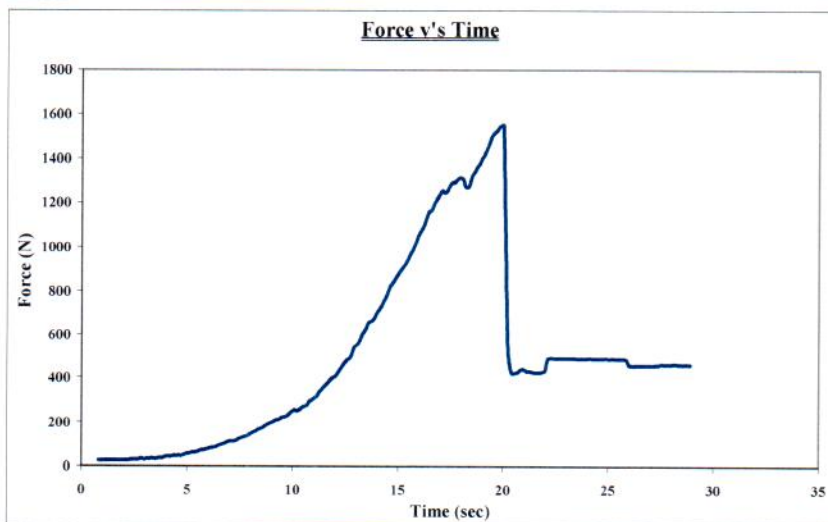
**Description of Test:** As per stage 1 test, wind winch until failure or 160 degrees rotation has been achieved by apparatus.

**Test Equipment Used:** Azuma security door and window grille test rig  
Azuma jemmy test apparatus and winch  
Azuma force gauge and readout  
Azuma lap top


**Result Pass or Fail:** PASS

**Maximum Force Achieved:** 1549 N

**Graph**



**Tested by:** Nathan Olsen **Date:** 1st August 2013

**Signatory Signature:** 

**Signatory Name:** Nathan Olsen

**Azuma Design Pty Ltd**

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**AZUMA TESTING REPORT #AZT0222.13**

**SLIDING SECURITY SCREEN DOOR**

**Pull Tests**

<i>LOCATION/FORCES</i>	<i>A</i> <i>150mm</i> <i>max.</i>	<i>B</i> <i>450mm</i> <i>max.</i>	<i>C</i> <i>100 x</i> <i>100mm</i> <i>max.</i>	<i>D</i>	<i>E</i>	<i>PASS</i>	<i>FAIL</i>
<i>HORIZONTAL PULL TEST</i> <i>2.0 kN</i>	-	-	-	-	-	√	
<i>CENTRE OF INFILL PULL TEST</i> <i>1.5 kN</i>	-	-	-	-	-	√	
<i>CENTRE OF LOCKING SIDE PULL TEST</i> <i>1.5 kN</i>	-	-	-	-	-	√	
<i>CENTRE OF NON-LOCKING SIDE PULL TEST</i> <i>1.5 kN</i>	-	-	-	-	-	√	
<i>CENTRE OF BOTTOM RAIL (SILL EDGE) PULL TEST</i> <i>2.0 kN</i>	-	-	-	-	-	√	
<i>CENTRE OF TOP RAIL PULL TEST</i> <i>1.5 kN</i>	-	-	-	-	-	√	

**A** – Max. size of any gap between Edge of Door and Frame after removal of force (static).

**B** – Max. size of gap at full Deflectional Load (dynamic).

**C** – The size of any gap occurring as a result of the test.

**D** – Whether any part of the infill broke away completely from the remainder of the door framing as a result of the test.

**E** – Whether the hinges and lock bolts continued to retain the door in a closed position.

**Result:** PASSED

**Remarks:** The test sample satisfied the requirements of the standard.

**Note:** Please see pull test reports on following pages for further detail.

**Azuma Design Pty Ltd**

**Address:** 52 Justin Street Smithfield NSW 2164 Australia **PH:** 61(02)9604 0255

**AZUMA TESTING REPORT #AZT0222.13**

AZT No: AZT0222.13

Date of Test: 1st August 2013

Australian Standard: AS 5039

Customer: The Australian Trellis Company

Product Tested: Horizontal pull

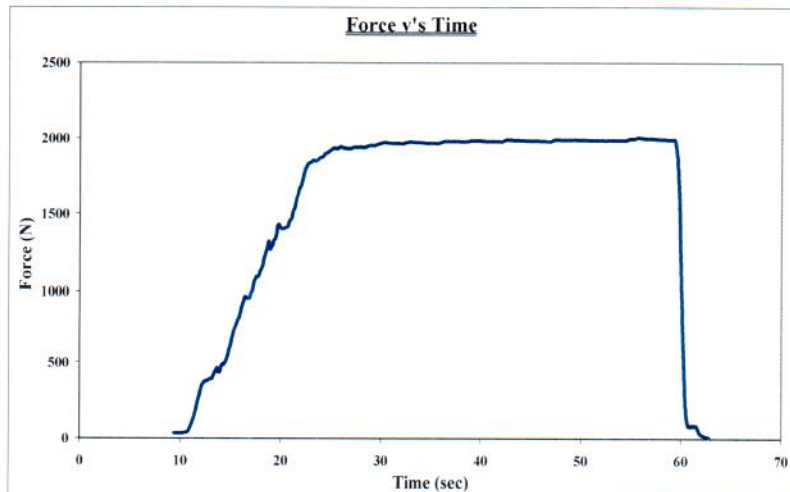
Description of Test: Mount test specimen into security door test rig. Set up Azuma pull test apparatus as specified by AS5041. Attach Azuma force gauge to winch cable and connect to lap top. Wind winch until failure or 2000 Newtons force has been achieved by apparatus. Record results of test.

Test Equipment Used: Azuma security door and window grille test rig  
Azuma jemmy test apparatus and winch  
Azuma force gauge and readout  
Azuma lap top

Result Pass or Fail: PASS

Maximum Force Achieved: 2007.3 N

Graph



Tested by: Nathan Olsen Date: 1st August 2013

Signatory Signature: N O

Signatory Name: Nathan Olsen

**Azuma Design Pty Ltd**

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**AZUMA TESTING REPORT #AZT0222.13**

AZT No: AZT0222.13

Date of Test: 1st August 2013

Australian Standard: AS 5039

Customer: The Australian Trellis Company

Product Tested: Centre infill pull

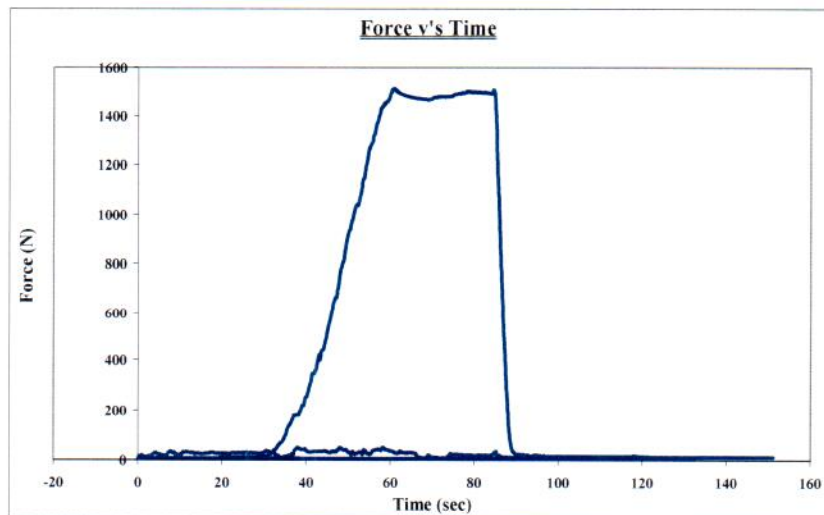
Description of Test: Mount test specimen into security door test rig. Set up Azuma pull test apparatus as specified by AS5041. Attach Azuma force gauge to winch cable and connect to lap top. Wind winch until failure or 1500 Newtons force has been achieved by apparatus. Record results of test.

Test Equipment Used: Azuma security door and window grille test rig  
Azuma jemmy test apparatus and winch  
Azuma force gauge and readout  
Azuma lap top

Result Pass or Fail: PASS

Maximum Force Achieved: 1513.9 N

Graph



Tested by: Nathan Olsen Date: 1st August 2013

Signatory Signature: 

Signatory Name: Nathan Olsen

**Azuma Design Pty Ltd**

Address: 52 Justin Street Smithfield NSW 2164 Australia PH: 61(02)9604 0255



**AZUMA TESTING REPORT #AZT0222.13**

**AZT No:** AZT0222.13

**Date of Test:** 1st August 2013

**Australian Standard:** AS 5039

**Customer:** The Australian Trellis Company

**Product Tested:** Centre lock pull

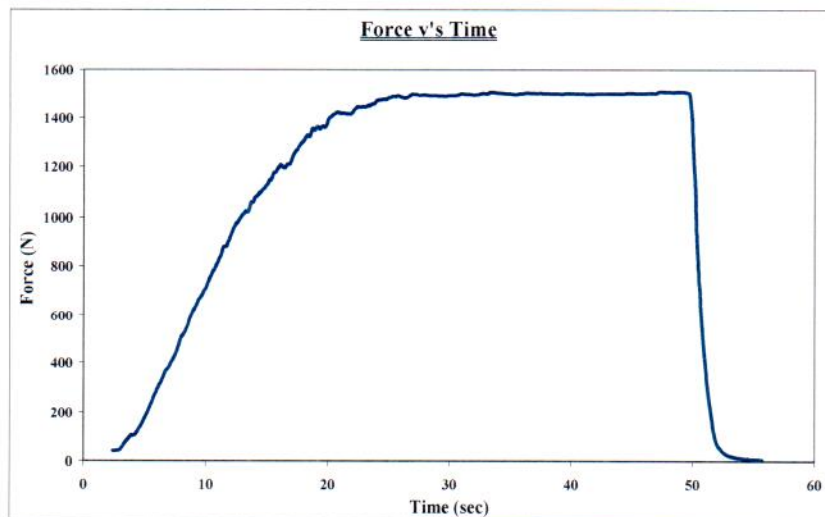
**Description of Test:** Mount test specimen into security door test rig. Set up Azuma pull test apparatus as specified by AS5041. Attach Azuma force gauge to winch cable and connect to lap top. Wind winch until failure or 1500 Newtons force has been achieved by apparatus. Record results of test.

**Test Equipment Used:** Azuma security door and window grille test rig  
Azuma jemmy test apparatus and winch  
Azuma force gauge and readout  
Azuma lap top


**Result Pass or Fail:** PASS

**Maximum Force Achieved:** 1509.1 N

**Graph**



**Tested by:** Nathan Olsen **Date:** 1st August 2013

**Signatory Signature:** 

**Signatory Name:** Nathan Olsen

**Azuma Design Pty Ltd**

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**AZUMA TESTING REPORT #AZT0222.13**

AZT No: AZT0222.13

Date of Test: 1st August 2013

Australian Standard: AS 5039

Customer: The Australian Trellis Company

Product Tested: Centre non lock pull

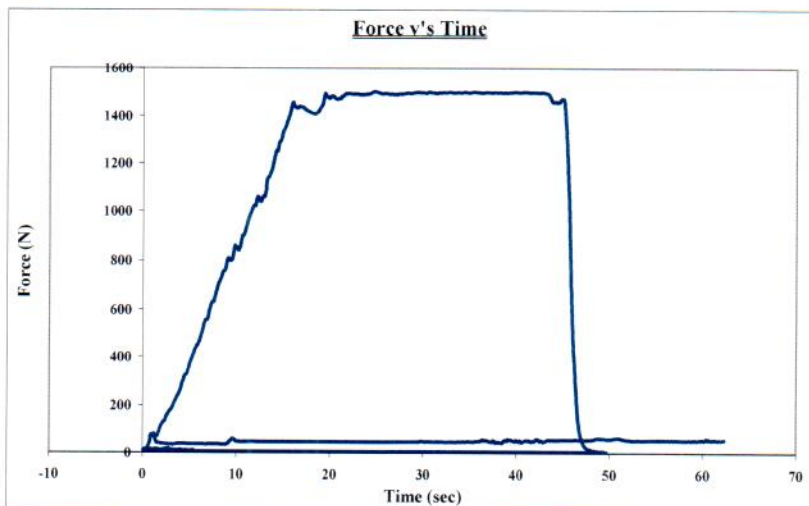
Description of Test: Mount test specimen into security door test rig. Set up Azuma pull test apparatus as specified by AS5041. Attach Azuma force gauge to winch cable and connect to lap top. Wind winch until failure or 1500 Newtons force has been achieved by apparatus. Record results of test.

Test Equipment Used: Azuma security door and window grille test rig  
Azuma jemmy test apparatus and winch  
Azuma force gauge and readout  
Azuma lap top

Result Pass or Fail: PASS

Maximum Force Achieved: 1503 N

Graph



Tested by: Nathan Olsen Date: 1st August 2013

Signatory Signature: N - O

Signatory Name: Nathan Olsen

**Azuma Design Pty Ltd**

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**AZUMA TESTING REPORT #AZT0222.13**

AZT No: AZT0222.13

Date of Test: 1st August 2013

Australian Standard: AS 5039

Customer: The Australian Trellis Company

Product Tested: Bottom edge pull

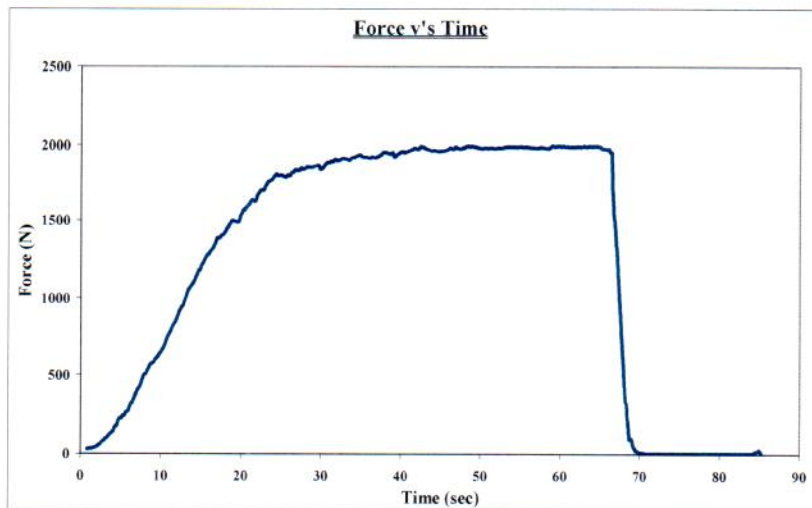
Description of Test: Mount test specimen into security door test rig. Set up Azuma pull test apparatus as specified by AS5041. Attach Azuma force gauge to winch cable and connect to lap top. Wind winch until failure or 2000 Newtons force has been achieved by apparatus. Record results of test.

Test Equipment Used: Azuma security door and window grille test rig  
Azuma jemmy test apparatus and winch  
Azuma force gauge and readout  
Azuma lap top

Result Pass or Fail: PASS

Maximum Force Achieved: 1999 N

Graph



Tested by: Nathan Olsen Date: 1st August 2013

Signatory Signature: 

Signatory Name: Nathan Olsen

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**AZUMA TESTING REPORT #AZT0222.13**

**AZT No:** AZT0222.13

**Date of Test:** 1st August 2013

**Australian Standard:** AS 5039

**Customer:** The Australian Trellis Company

**Product Tested:** Top edge pull

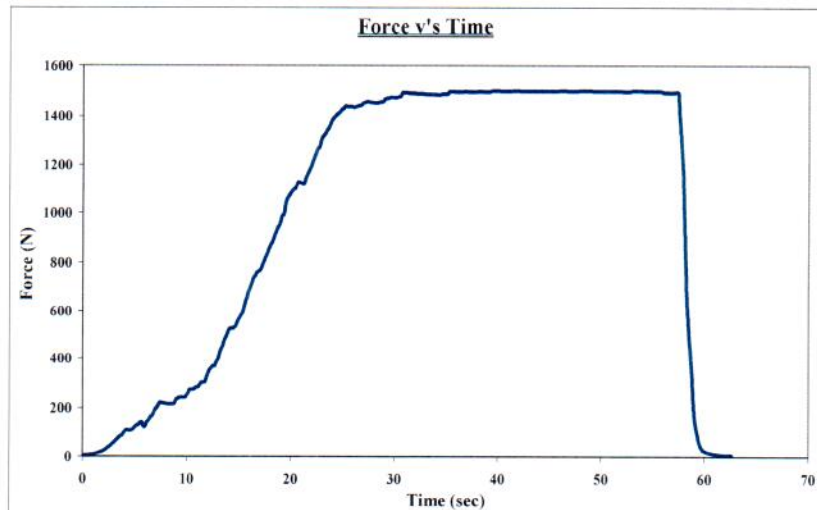
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**Test Equipment Used:** Azuma security door and window grille test rig  
Azuma jemmy test apparatus and winch  
Azuma force gauge and readout  
Azuma lap top


**Result Pass or Fail:** PASS

**Maximum Force Achieved:** 1503.1 N

**Graph**



**Tested by:** Nathan Olsen **Date:** 1st August 2013

**Signatory Signature:** 

**Signatory Name:** Nathan Olsen

**Azuma Design Pty Ltd**

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**A Z U M A**  
Design

NATA Accredited Laboratory No: 15147



**AZUMA TESTING REPORT #AZT0222.13**

**CONCLUSION**

**Test**

**Result**

Dynamic Impact test:

**PASSED**

Lock and Hinge lever test:

**PASSED**

Pull test:

**PASSED**

SIGNATORY NAME: Nathan Olsen

SIGNATURE: 

DATE: 16<sup>th</sup> August 2013

**Azuma Design Pty Ltd**

Address: 52 Justin Street Smithfield NSW 2164 Australia PH: 61(02)9604 0255