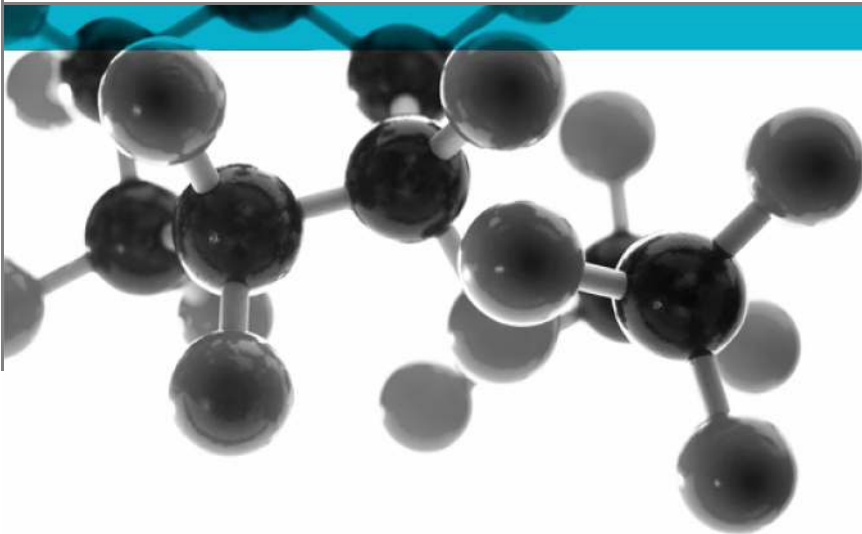


STS202

Issue 6: September 2015



Test of: 19 Point Heavy Single Doorset

Burglary resistance requirements for construction products including doorsets, windows, curtain walling, security grilles, garage doors and roller shutters.

A Report To:
Latham's Steel Security Doorsets Ltd
35 - 37 Hainge Road
Tividale
Birmingham
B69 2NY

Document Reference:
WIL 370494

Date: 23/08/2017

Copy: 1

Issue No.: 1

Page 1

Testing
Advising
Assuring

TEST CONCLUSIONS

Samples of:
Manufacturer Lathams Steel Security Doorsets Ltd
Product Single doorset
Model 19 Point Heavy Single Doorset

have been tested in accordance with: STS 202 Issue 6: September 2015
By Exova (UK) Ltd, a UKAS accredited Testing Laboratory (No. 0621)

At Key Industrial Park, Fernside Rd, Willenhall, West Midlands, WV13 3YA.
Results and comments as detailed below:

Clause No.	Description	Compliance
5	Resistance Class – BR1	YES
6	Test requirements and procedures	YES
9	Requirements for hardware	YES
11	Labelling and Conformity	NO
12	Installation instructions	NO

Testing carried out outside the scope of UKAS approval
No inferences can be made regarding performance against other requirements of this standard

Tests marked “N/A” are not applicable to the sample under test.
Tests marked “N/T” were not applied to the sample under test

AUTHORISATION

Tests performed by: Chris Bryan, Test Engineer
Joshua O'Brien, Trainee Test Engineer

Report issued by: Mark Garfield, Business Development Engineer



Signed

Date 22nd August 2017

For and on behalf of Exova (UK) Ltd

Report authorised by: Mark West, Door & Window Laboratory Manager



Signed

Date 22nd August 2017

For and on behalf of Exova (UK) Ltd

Report issued: 23 August 2017

NOTE.

These tests are not covered by the Laboratory UKAS accreditation schedule.

Tests marked NT were not tested

Tests marked NA are not applicable to the product on test.

The laboratory has tested the product supplied by the client as sampled in accordance with their own requirements

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Document No.: WIL370494

Page No.: 3 of 23

Author: M Garfield

Issue Date: 23/08/2017

Client: Lathams Steel Security
Doorsets Ltd

Issue No.: 1

CONTENTS

PAGE NO.

..... **Error! Bookmark not defined.**

TEST CONCLUSIONS 2

AUTHORISATION..... 3

TEST DETAILS..... 5

TEST PROCEDURE 6

INITIAL OBSERVATIONS..... 7

TEST SPECIMEN 12

SCHEDULE OF COMPONENTS 15

PERFORMANCE CRITERIA & TEST RESULTS 19

CONCLUSIONS 22

LIMITATIONS 22

REVISION HISTORY 23

TEST DETAILS

CLIENT DETAILS

Company name Latham's Steel Security Doorsets Ltd,
 Address 35 -37 Hainge Road
 Tividale
 Birmingham
 B69 2NY

Contact Chris Hardy

ORDER DETAILS

Order number VERBAL-ALEX
 Dated

SAMPLE DETAILS

Outer frame 1140 x 2012mm
 Opening leaves 1061 x 1963mm
 Material Steel
 Details of Hardware
 Hinges 4no. Yongkang Bosslong Industrial & Trading Co Ltd Z-304 lift off Z-shape hinges
 Hinge protection 4no. Zhejiang Shenjiang Doors Industry Co., Ltd DB14/15 Solid screw in dog bolt
 Lock Zhejiang Hongli Locks Co. HL#ST11 sash lock and #16-15 side locks
 Cylinder Eurospec MPX6+ 3* cylinder
 Handles Hongli Lock HL#6198 Lever Handles

TEST DETAILS

Test specification STS 202 Issue 6 : September 2015
 Full test Yes
 Test to clauses All

Sample received 04/10/16
 Test started 05/10/16
 Test completed 05/10/16

Special Test requirements
 Other reports to be used in conjunction with this report

Document No.:	WIL370494	Page No.:	5 of 23
Author:	M Garfield	Issue Date:	23/08/2017
Client:	Lathams Steel Security Doorsets Ltd	Issue No.:	1

TEST PROCEDURE

Introduction	<p>This test report should be read in conjunction with the technical schedule STS 202 Issue 6: September 2015 Burglary resistance requirements for construction products including doorsets, windows, curtain walling, security grilles, garage doors and roller shutters.</p> <p>The specimens were judged on their ability to comply with the performance criteria as required in STS202.</p>
Instruction To Test	<p>Initial requirement was for a burglar resistance level BR2.</p>
Test Specimen Construction	<p>A description of the test construction is given in the Schedule of Components. The description is based on a detailed survey of the specimens and information supplied by the sponsor of the test.</p>
Installation	<p>The sample was supplied mounted within a timber sub-frame of nominal section 75mm x 100mm fitted flush with the exterior face, in accordance with the clients fitting instructions.</p> <p>A representative of Latham's Steel Security Doorsets Ltd witnessed the test.</p>
Sampling	<p>The samples were not independently witnessed or selected and were provided direct from the test sponsor.</p>
Test Climate	<p>The sample was conditioned in the laboratory in the range 10-30 °C and 25-75% humidity.</p> <p>The temperature and humidity in the lab was maintained in the range 17.2-21.0°C and 46.4-68.4% humidity for the duration of the test.</p>

INITIAL OBSERVATIONS

**The internal face
of the sample**



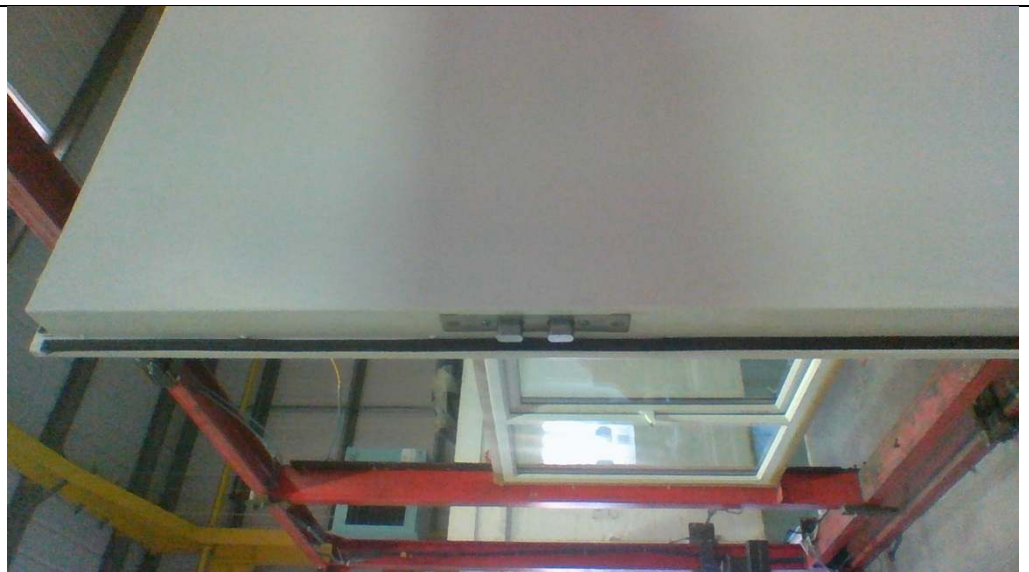
**The external face
of the sample**



Sample hardware



Sample top locking point



Sample handle & centre locking point



Sample handle (Hoopley 6198 for retest)



Sample hinge



Sample top keeper

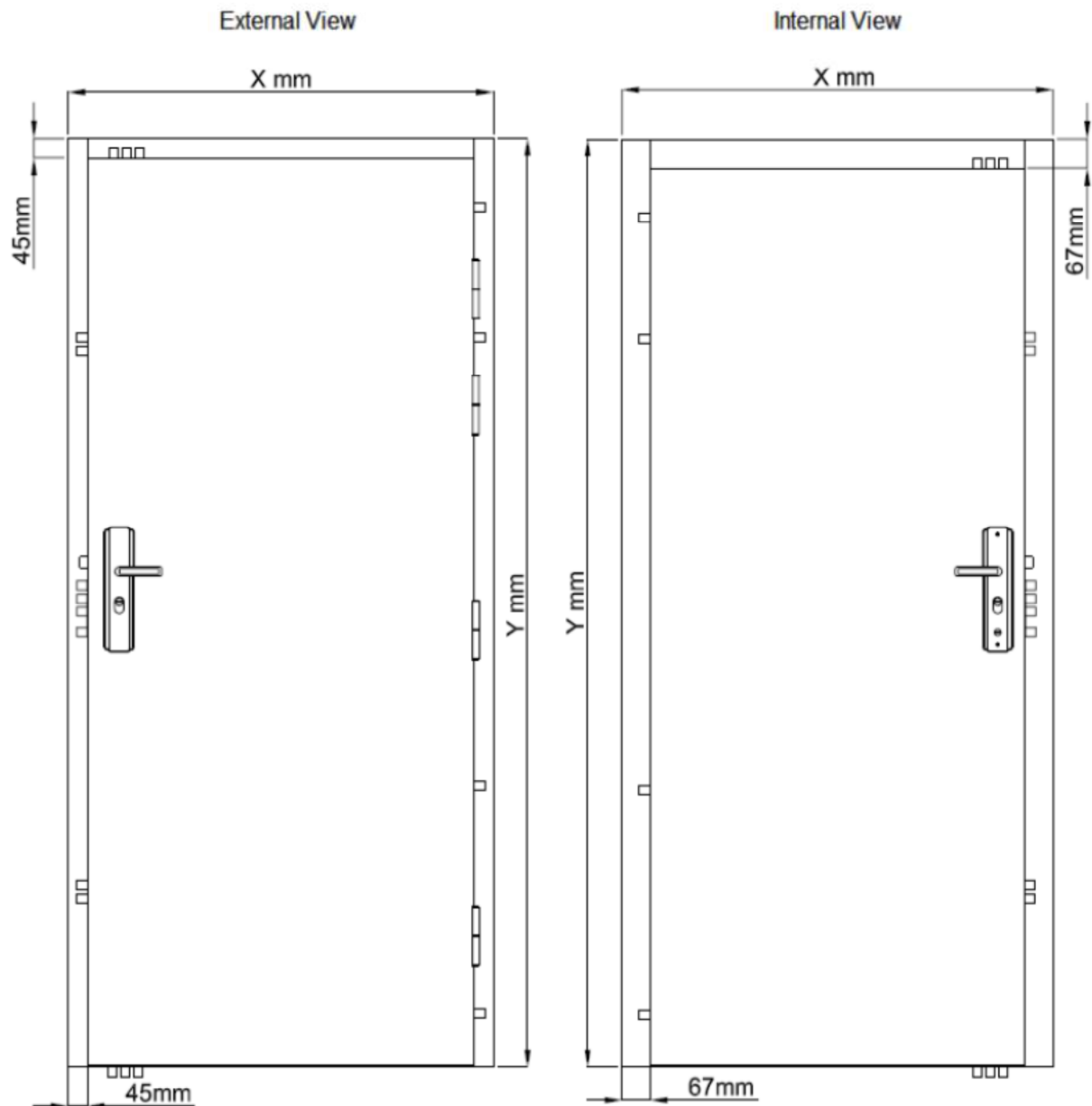


**Sample centre
keeper**



TEST SPECIMEN

Figure 1- General Elevation of Test Specimen (External Face)



Do not scale. All dimensions are in mm

Document No.: WIL370494

Author: M Garfield

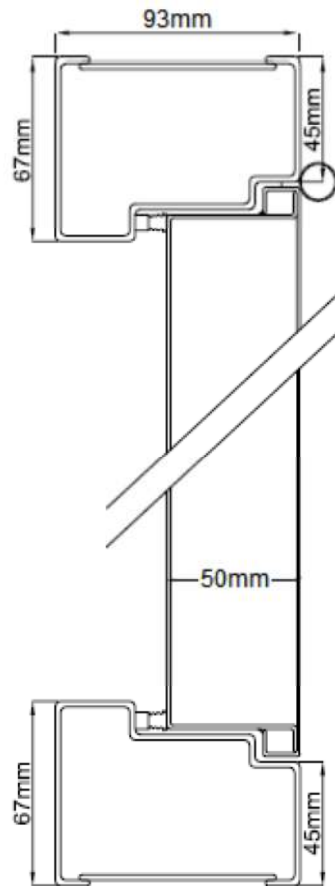
Client: Lathams Steel Security
Doorsets Ltd

Page No.: 12 of 23

Issue Date: 23/08/2017

Issue No.: 1

Figure 2 – Horizontal section



Do not scale. All dimensions are in mm

Document No.: WIL370494

Author: M Garfield

Client: Lathams Steel Security
Doorsets Ltd

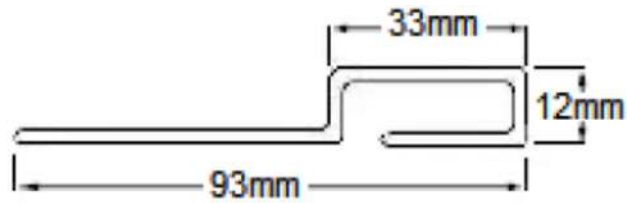
Page No.: 13 of 23

Issue Date: 23/08/2017

Issue No.: 1

Figure 3 – Vertical section

Drawings to be supplied by client /
No drawings supplied by client



Do not scale. All dimensions are in mm

Document No.:	WIL370494	Page No.:	14 of 23
Author:	M Garfield	Issue Date:	23/08/2017
Client:	Lathams Steel Security Doorsets Ltd	Issue No.:	1

SCHEDULE OF COMPONENTS

(Refer to Figures 1 to 3)
(All values are nominal unless stated otherwise)
(All other details are as stated by the sponsor)

Variants

None

<u>Item</u>	<u>Description</u>
1. Door frame head	
Supplier	: Zhejiang Shenjiang Doors Industry Co., Ltd
Profile code	: B332/50mm
Material	: Steel
Grade	: Galvanised cold rolled steel
Gauge	: 2.0mm
Overall section size	: 67 x 93mm
Rebate	: 60mm
Fixing jamb to head joints	: Continuous weld 45mm internal, 35mm top, 25mm external
2. Door frame jamb	
Supplier	: Zhejiang Shenjiang Doors Industry Co., Ltd
Profile code	: B332/50mm
Material	: Steel
Grade	: Galvanised cold rolled steel
Gauge	: 2.0mm
Overall section size	: 67 x 93mm
Rebate	: 60mm
3. Door frame threshold	
Supplier	: Zhejiang Shenjiang Doors Industry Co., Ltd
Profile code	: B332/50mm
Material	: Steel
Grade	: Galvanised cold rolled steel
Gauge	: 2mm
Overall size	: 12 x 93mm frame depth
Fixing method	: Continuous weld 3 on either side
4. Door frame weather seal	
Supplier	: Yongkang Bosslong Industrial & Trading Co. Ltd
Reference	: #306-11 x 2 & #305-15 x 2
Material	: Flame Retardent PU + Expanded graphite
Fixing method	: Self-Adhesive
Position	: All four edges
Continuity	: Uninterrupted by hardware

Document No.:	WIL370494	Page No.:	15 of 23
Author:	M Garfield	Issue Date:	23/08/2017
Client:	Lathams Steel Security Doorsets Ltd	Issue No.:	1

<u>Item</u>	<u>Description</u>
5. Door leaf Facings	
Leaf supplied by	: Zhejiang Shenjiang Doors Industry Co., Ltd
Overall leaf size	: 50mm thick
Material	: Galvanised Steel
Thickness	: 1mm, formed in to trays and welded together.
Density	: 7850kg/m ³ (stated)
Core section size	: 48mm
Corner fixing method	: Weld
i. type	: Spot Weld
ii. size	: 3mm on average
iii. quantity	: 12 hinge side, 12 latching side, 6 top, 5 bottom.
6. Door leaf core	
Material	: Wuyi NiuNiu Fireproof Board Material Co., Ltd
Density	: 260kg/m ³ (stated)
Thickness	: 48mm
Fixing into rebate	: Bonded to door leaf facings with adhesive
7. Door edge lippings	
Position	: Folded into door leaf interlocking trays
Material	: As 1
Density	: kg/m ³ (stated)
Thickness	: As 1
Overall size	: 10mm x 15mm jemmy bar lip.
8. Door leaf weather seals	
Description	: Intumescent seal
Manufacturer	: Yongkang Bosslong Industrial & Trading Co. Ltd
Reference	: #306-11x2 & #305-15x2
Fixing method	: Self-Adhesive
Position	: All four edges
Continuity	: Uninterrupted by hardware
9. Hinges	
Supplier	: Yongkang Bosslong Industrial & Trading Co Ltd
Description	: Lift off Z Shape
Reference	: Z-304
Primary material	: Grade #304 Stainless Steel
Quantity	: 4
Size of knuckle	: 18 x 130mm
Size of blades	: 60 x 55mm
Fixing hinge to doorleaf	
i. type	: Machine Screw
ii. size	: M6 x 12mm
iii. quantity	: 4
Fixing hinge to frame	
i. type	: Machine Screw
ii. size	: M6 x 12mm
iii. quantity	: 5

Document No.:	WIL370494	Page No.:	16 of 23
Author:	M Garfield	Issue Date:	23/08/2017
Client:	Lathams Steel Security Doorsets Ltd	Issue No.:	1

Item	Description
Position of hinge	
i. top hinge	: 207mm from top of door to top of hinge
ii. 2nd hinges	: 667mm from top of door to top of hinge
iii. 3 rd hinge	: 1307mm from top of door to top of hinge
iv. bottom hinge	: 1767mm from top of door to top of hinge
10. Dog bolts	
Supplier	: Zhejiang Shenjiang Doors Industry Co., Ltd
Description	: Solid screw in dog bolt
Reference	: DB14/15
Material	: Steel
Quantity & position	: 1 above and below top hinge and 1 above and below bottom hinge equalling 4 total.
Overall size	
i. dog bolt	: 14mm * 15mm
ii. retaining ring / keeper	: 24mm
11. Sash Lock	
	Multipoint locking system
Supplier	: Zhejiang Hongli Locks Co.
Description	: Sash lock, solid large bolt
Reference	: HL#ST11
Position	: 1045mm from bottom of door to centre of spindle/lock
Fixings	
i. type	: Machine Screw
ii. size	: M4 x 10mm
iii. quantity	: 4
12. Side Locks and Shoot Bolts	
Supplier	: Zhejiang Shenjiang Doors Industry Co., Ltd
Description	: Internal rods and spring side locks
Reference	: #16-15mm
Position	: 400mm from top of the door 1562mm from top of the door
Fixings	
i. Type	: Machine Screw
ii. Size	: M4 x 10mm
iii. Quantity	: 2
13. Cylinder	
Supplier	: Carlisle Brass
Description	: Eurospec 3* Cylinder
Kitemark	: 597142
Reference	: MPX6+
Fixings	
i. type	: Machine Screw
ii. size	: M5x65mm
iii. quantity	: 1

Item

Description

14. Lever handles

Supplier	:	Hongli Lock
Description	:	Lever Handles
Reference	:	HL#6198
Material	:	Stainless Steel
Fixings		
i. type	:	Machine Screw + Thread Extension
ii. size	:	M5 x 50mm + 50mm double female extension
iii. quantity	:	2

PERFORMANCE CRITERIA & TEST RESULTS

Clause	Requirement	Result	Pass/fail
4. General Requirements			
4.1	The client shall supply detailed information about the product to be tested.	Information supplied by the client prior to testing.	PASS
4.2	The size and range of products shall be agreed in advance.	Product range and sized agreed by the client.	PASS
4.3	The test samples shall be fully functioning, and be fitted to the subframe in accordance with the manufacturers installation instructions.	Samples fully functioning and fitted in accordance with manufacturers installation instructions.	PASS
4.4	The attack face and required burglar resistance rating shall be agreed with the client.	Attack face was defined as the external face. Initial requirement was for a rating of BR2.	PASS
4.5	An agreed number of samples shall be supplied.	2no. test samples supplied.	PASS
6.6	The sample shall be checked for damage prior to testing and any damage recorded.	Sample undamaged prior to testing.	PASS
	The sample shall be closed and locked, and tested in the most secure position.	Specimen closed and locked.	PASS
6.7 Pre test	Every conceivable combination of tool and attack method shall be used to identify the most productive method of attack for the sample.		
BR1 Tool kit 1 Resistance time 1 min	Attacks were made to try and cut through hinge with snips for 1min entry not achieved.		FAIL BR1
	Attacks were made to try and remove hinge with plier for 1min entry not achieved.		
	Attacks were made to try and remove hinge with mole grips for 1min entry not achieved.		
	Attacks were made to try and lever out the hinge with a screwdriver and nail bar for 1min entry not achieved.		
	Attacks were made to try and lever between hinge points with a screwdriver and nail bar for 1min entry not achieved.		

Document No.: WIL370494

Page No.: 19 of 23

Author: M Garfield

Issue Date: 23/08/2017

Client: Lathams Steel Security
Doorsets Ltd

Issue No.: 1

Clause	Requirement	Result	Pass/fail
	<p>Attacks were made to try and stab through the door leaf with a knife for 1min entry not achieved.</p> <p>Attacks were made to try and stab through the door leaf with a screwdriver for 1min entry not achieved</p> <p>Attacks were made to try and pull the door open with hands for 1min, entry nota achieved.</p> <p>Attacks were made to the cylinder with a screwdriver and mole grips for 58sec, entry achieved cylinder snapped.</p> <p>Attacks were made to the corner of locking style to try and disengage locks for 1min entry not achieved.</p> <p>Attacks were made to the bottom locking point to try and disengage lock for 1min entry not achieved.</p> <p>Attacks were made between middle and bottom locking point to try and disengage lock for 1min entry not achieved</p> <p>New Sample supplied on 19/12/2016. With new cyclinder and handle – Eurospec 3 star cylinder Hoopley 6198 Handle Attacks were made with a nail bar and mole grips to try remove the handle and manipulate the cylinder for 1 minute. Entry not gained.</p>		PASS BR1
BR2 Tool Kit 2 Resistance time 3 mins	<p>Attacks were made to the hinge with bolt cutters for 43sec to try and cut through the hinges, entry not achieved.</p> <p>Attacks were made to the hinge with plate sheers for 47sec to try and cut through the hinges, entry not achieved.</p> <p>Attacks were made to the hinge with a hammer and impact driver for 3min to try to defeat the hinge. Entry not achieved.</p> <p>Attacks were made to the centre of the leaf try and drill and hammer a hole into it for 3min entry not achieved.</p> <p>Attacks were made with the drill, mole grips and impact driver to the leaf to try to shear the leaf for 3min entry not achieved.</p> <p>Attacks were made to the bottom edge of the locking stile to try and disengage the locking points with a hammer, impact driver, screwdriver, nail bar and work up the locking stile with the wedges for 2min 37sec min were entry was achieved</p> <p>New Sample supplied on 19/12/2016. With new cylinder and handle – Eurospec 3 star cylinder & Hoopley 6198 Handle</p> <p>Attacks were made with the hammer, nail bar, screwdriver to remover the handle and cylinder guard to try and manipulate the cylinder to gain entry for</p>		PASS BR 2 FAIL BR 2

Clause	Requirement	Result	Pass/fail
	3 minutes. Entry not gained		
	Attacks were made to try and lever the locks open from the bottom corner with the nail bar, hammer and wedges. Entry was achieved at 2 minutes 20 seconds		FAIL BR 2
6.10 Main test	The burglar resistance attack method used by the test team during the main test shall be the one most likely to gain entry in their opinion, as determined during the pre-test.		
BR 1 Tool kit 1 Resistance time 1 min	The main test was not carried out the doorset met the requirements of BR1 when fitted with: Eurospec 3 star cylinder with Hooply 6198 Handle		PASS BR1
9 Requirements for hardware	Any locking cylinders should meet the requirements of a one star rating to TS007, including the general vulnerability of the cylinder, if applicable.	Evidence supplied BSI report KM597142	PASS
11 Labelling and Conformity	The product should be fitted with a tamper evident identification label.	Pre certification prototype only. No labels supplied as yet. Customer advised of labelling requirements for production.	No
	The label should be fitted so it is visible when the sample is open but not necessarily when closed.	Pre certification prototype only. No labels supplied as yet. Customer advised of labelling requirements for production.	No
	The label shall include the following information:- The WCL Mark or Certisecure logo The certificate number A unique serial number Optionally certificate holders name The technical specification number (STS202) The security classification (BR2)	Pre certification prototype only. No labels supplied as yet. Customer advised of labelling requirements for production.	No
12 Installation instructions	The product shall be supplied with full installation instructions.	Pre certification prototype only. Customer advised of installation instruction requirements for production.	No

CONCLUSIONS

Evaluation against objective	The sample as provided by the client was subjected to burglar resistance testing in accordance with STS 202: Issue 6: September 2015 and achieved the requirements for a burglar resistance level of BR1.
Observations & comments	Sample meets the requirements of BR1 when fitted with Eurospec 3 star cylinder & Hoopley 6198 Handle

LIMITATIONS

Limitations	The results relate only to the behaviour of the specimens of the element of construction under the particular conditions of test. They are not intended to be the sole criteria for assessing the potential performance of the element in use, nor do they reflect the actual behaviour in use.
Range of assemblies covered by this report	<p>It is our opinion that the range of assemblies covered by this report are limited to the following</p> <ul style="list-style-type: none">▪ Assemblies with identical hardware fitted no further apart than in the tested assembly▪ Assemblies of the same or smaller overall dimensions to the tested assembly
Uncertainty of Measurement	<p>The uncertainties of measurements calculated for a confidence level of 95% throughout these tests are within the limits of these tolerances.</p> <p>The standard specifies the following tolerances</p> <ul style="list-style-type: none">▪ Forces: $\pm 2\%$▪ Distances: $\pm 1\text{mm}$ for tape measures $\pm 0.01\text{mm}$ for dial gauges▪ Times: $\pm 5\text{s}$

REVISION HISTORY

Issue No :	Re - Issue Date :
Revised By:	Approved By:
Reason for Revision:	

Issue No :	Re - Issue Date :
Revised By:	Approved By:
Reason for Revision:	

END OF REPORT