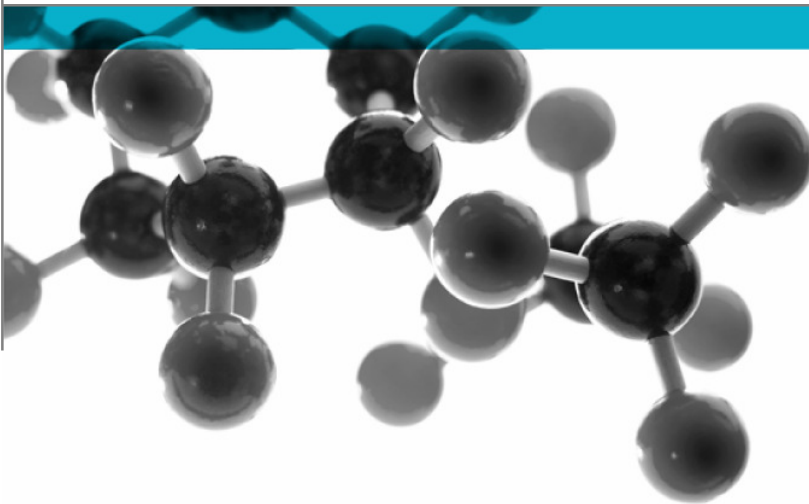


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BS EN 14351-1:2006



Test of: Various windows fitted with restrictors

**Windows and doors – Product standard,
performance characteristics**

A Report To: Nico Manufacturing Ltd

Document Reference: WIL 328856

Date: 29/07/2013

Copy: 1

Issue No.: 1

Page 1

Testing
Advising
Assuring



TEST CONCLUSIONS

Samples of:

Window Manufacturers	Various
Restrictor Manufacture	Nico Manufacturing Ltd
Product	Various
Models	Various

have been tested in accordance with: BS EN 14351-1:2006

By Exova Warringtonfire Willenhall, a UKAS accredited Testing Laboratory (No. 0621) and EC Notified Body number (No. 1104)

At Key Industrial Park, Fernside Rd, Willenhall, West Midlands, WV13 3YA.

Results and comments as detailed below:

Clause No.	Description	Compliance
4.8	Load bearing capacity of safety devices – 350N	Yes

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, Laboratory Technician

Report issued by: Chris Bryan, Laboratory Technician



Signed

Date 29th July 2013

For and on behalf of Exova Warringtonfire

Report authorised by: Mark West, Assistant Operations Manager



Signed

Date 29th July 2013

For and on behalf of Exova Warringtonfire

Report issued: 29 July 2013



NOTE.

Tests marked "Not UKAS Accredited" 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

Exova Warringtonfire is an EC Notified Body Number 1104

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TEST DETAILS

CLIENT DETAILS

Company name Nico Manufacturing Ltd
 Address Oxford Road
 Clacton-on-sea
 Essex
 Postcode CO15 3TJ
 Contact Duncan Kury

ORDER DETAILS

Order number 31667
 Dated 15/04/2013

SAMPLE DETAILS

Product Various top hung and side hung window
 Model 8360 24" Restricted hinge
 8340 16" Restricted hinge
 7940 16" Restricted hinge
 7960 24" Restricted hinge
 7760SE 24" Restricted hinge
 8441 16" Restricted egress hinge
 8446 16" Restricted egress hinge
 6000 Latch
 6013 and 6017 catch peg
 Window Various
 Manufacturers
 Restrictor Nico Manufacturing Ltd
 Manufacture
 Frame Dimensions 700x 1300mm Windows 2,3 and 4
 1200 x 1200 mm Windows 1,5,6,7 and 8
 Sash Dimensions 650x 1245mm Windows 2,3 and 4
 1130 x 1130 mm Windows 1,5,6,7 and 8
 Material PVC-u
 Details of Hardware
 Hinges Various
 Hinge protection Various
 Lock Various
 Markings None
 Date of Manufacture Unknown
 Other information None

TEST DETAILS

Test specification BS EN 14351 :2006
 Full test Yes
 Test Method BS EN 14609:2004 strength of safety devices
 Sample received 09/05/2013
 Test started 09/05/2013
 Test completed 09/05/2013
 Special Test requirements None
 Other reports to be used in conjunction with this report None

Document No.: WIL 328856

Page No.: 5 of 28

Author: C Bryan

Issue Date: 29/07/2013

Client: Nico Manufacturing Ltd

Issue No.: 01

TEST PROCEDURE

Introduction	<p>This test report should be read in conjunction with the Standard BS EN 14351-1:2006: Windows and doors – Product standard, performance characteristics – Part 1: Windows and external pedestrian door set's with out resistance to fire and/or smoke leakage characteristics.</p> <p>The specimens were judged on their ability to comply with the performance criteria as required in BS EN 14351-1:2006, with test methods BS EN 14609.</p>
Instruction To Test	<p>The test was conducted on the 9th May 2013 on behalf of Nico Products Ltd</p> <p>Mr Duncan Kury, a representative of Nico Manufacturing Ltd witnessed the test.</p> <p>Initial requirement was as defined in BS6375-2, requiring a performance of a threshold value of 350N for load-bearing capacity of safety devices.</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>
Sampling	<p>The samples were not independently witnessed or selected and were provided direct from the test sponsor.</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>
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 19.0-25.7°C and 28.1-44.8% humidity for the duration of the test.</p>

INITIAL OBSERVATIONS

Window	Company	Model	Restrictor 1	Restrictor 2	Restrictor 3
1	Quantum windows	Eurocell Logic	7760 SE 24" Top hung restricted hinge	N/a	N/a
2	CWG Choice	Kommerling	8340 16" Side hung restricted hinge	8446 16" side hung restricted egress hinge	6000 Latch and 6017 Catch peg
3	Seal-Lite	Swish 24/7	8340 16" Side hung restricted hinge	8446 16" side hung restricted egress hinge	6000 Latch and 6017 Catch peg
4	CWG Choice	Kommerling	8360 24" Top hung restricted hinge	6000 Latch and 6017 Catch peg	N/a
5	Seal-Lite	Swish 24/7	8360 24" top hung restricted hinge	6000 Latch and 6017 Catch peg	N/a
6	Wakefield district council	LB Sheerframe 7000	7960 24" top hung restricted hinge	6000 Latch and 6013 Catch peg	N/a
7	Wakefield district council	LB Sheerframe 7000	7940 16" side hung restricted hinge	8441 16" side hung restricted egress hinge	6000 Latch and 6013 Catch peg

SCHEDULE OF COMPONENTS – SAMPLE 1

(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. Window casement (s)	
Overall Size	1200mm X 1200mm
Supplier	: Quantum Windows Eurocell Eurologic
Profile codes	7008W
Material	: PVC
Sash framing section sizes	1136mm X 1136mm
Corner fixing method Type size quantity	: Welded
Reinforcement	None
2. Window casement glass	
Supplier	: CET glass processors (holdings) Ltd
Thickness	: 4-20-4
Overall size	1018mm X 1018mm
3. Window frame head	
Supplier	: Eurocell eurologic
Profile code	: 7021W
Material	: PVC
Overall section size	: 1200mm
Fixing jamb to head joints	: Welded
4. Window frame jamb	
Supplier	: Eurocell eurologic
Profile code	: 7021W
Material	: PVC
Overall section size	: 1200mm
Rebate	:
Fixing jamb to sill joints	Welded
5. Window frame sill	
Supplier	: Eurocell eurologic
Profile code	: 7021W
Material	: PVC
Overall section size	: 1200mm

Item**Description****6. Hinges**

Supplier	:	Nico Manufacturing Ltd
Description	:	24" Permanent restricted friction hinge
Quantity	:	2
Fixing hinge to sash		
i. type	:	Pan head pierce point
ii. size	:	4.8mm X 25mm
iii. quantity	:	4
Fixing hinge to frame		
i. type	:	Pan head drill point
ii. size	:	4.8mm X 16mm
iii. quantity	:	3

SCHEDULE OF COMPONENTS – SAMPLE 2

(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. Window casement (s)	
Overall Size	700mm X 1300mm
Supplier	: CWG Choices Kommerling C70
Profile codes	: 7581-654
Material	: PVC
Sash framing section sizes	: 648mm(w) X 1248mm(h)
Corner fixing method Type size quantity	: Weld
Reinforcement	
i. position	: Jambs
ii. profile code	: 675
iii. material	: Steel
iv. length	: 1127mm
2. Window casement glass	
Supplier	:
Thickness	: 4-20-4
Overall size	: 526mm X 1126mm
3. Window frame head	
Supplier	: Kommerling C70
Profile code	: 7502-654
Material	: PVC
Overall section size	: 700mm
Fixing jamb to head joints	:
i. type	: Weld
4. Window frame jamb	
Supplier	: Kommerling C70
Profile code	: 7502-654
Material	: PVC
Overall section size	: 1300mm
Fixing jamb to sill joints	:
i. type	: Weld
5. Window frame sill	
Supplier	: Kommerling C70
Profile code	: 7502-654
Material	: PVC
Overall section size	: 700mm
Reinforcement	: None

<u>Item</u>	<u>Description</u>
6. Hinges	
Supplier	: Nico Manufacturing Ltd
Description	: 16" Restricted friction hinge 16" Standard friction hinge
Reference	: Restricted 8340, Standard 8240
Quantity	: 1 of each
Fixing hinge to sash	
i. type	: Pan head pierce point
ii. size	: 4.8mm X 25mm
iii. quantity	: 4
Fixing hinge to frame	
i. type	: Pan head pierce point
ii. size	: 4.8mm X 25mm
iii. quantity	: 3
7. Restrictor	
Supplier	: Nico Manufacturing Ltd
Description	: Restrictor safety catch
Reference	: 6000(catch), 6017(striker)
Fixing restrictor to sash	
i. type	: Countersunk pierce point
ii. size	: 4.3mm X 25mm
iii. quantity	: 2
Fixing restrictor to frame	
i. type	: Countersunk pierce point
ii. size	: 4.3mm X 25mm
iii. quantity	: 2
8. Hinges (Additional Test)	
Supplier	: Nico Manufacturing Ltd
Description	: 16" Restricted egress friction to bottom 16" Egress friction hinge top
Reference	: Restricted egress 8446 RES, Egress 8446
Quantity	: 1 of each
Fixing hinge to sash	
i. type	: Pan head pierce point
ii. size	: 4.8mm X 25mm
iii. quantity	: 4
Fixing hinge to frame	
i. type	: Pan head pierce point
ii. size	: 4.8mm X 25mm
iii. quantity	: 3

SCHEDULE OF COMPONENTS – SAMPLE 3

(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. Window casement (s)	
Overall Size	700mm(w) X 1300mm(h)
Supplier	: Seal-Lite Group Swish 24/7
Profile codes	X844
Material	: PVC
Sash framing section sizes	636mm(w) X 1086mm(h)
Corner fixing method Type size quantity	: Weld
Reinforcement	
i. position	: Lockside Hinge side
ii. profile code	: S844 RCM839
iii. material	: Steel Recycled composite material
iv. length	: 1091mm 1091mm
2. Window casement glass	
Supplier	: DB Glass
Thickness	: 4-20-4
Overall size	518mm X 1118mm
3. Window frame head	
Supplier	: Swish 24/7
Profile code	: X841
Material	: PVC
Overall section size	: 700mm
Fixing jamb to head joints	:
i. type	: Weld
4. Window frame jamb	
Supplier	: Swish 24/7
Profile code	: X841
Material	: PVC
Overall section size	: 1300mm
Fixing jamb to sill joints	:
i. type	: Weld

<u>Item</u>	<u>Description</u>
5. Window frame sill	
Supplier	: Swish 24/7
Profile code	: X841
Material	: PVC
Overall section size	: 700mm
Reinforcement	: None
6. Hinges	
Supplier	: Nico Manufacturing Ltd
Description	: 16" Restricted friction hinge to bottom 16" Standard friction hinge to top
Reference	: Restricted 8340 Standard 8240
Quantity	: 1 of each
Fixing hinge to sash	
i. type	: Pan head pierce point
ii. size	: 4.8mm X 25mm
iii. quantity	: 4
Fixing hinge to frame	
i. type	: Pan head pierce point
ii. size	: 4.8mm X 25mm
iii. quantity	: 3
7. Restrictor	
Supplier	: Nico Manufacturing Ltd
Description	: Restrictor safety catch
Reference	: 6000(catch), 6017(striker)
Fixing restrictor to sash	
i. type	: Countersunk pierce point
ii. size	: 4.3mm X 25mm
iii. quantity	: 2
Fixing restrictor to frame	
i. type	: Countersunk pierce point
ii. size	: 4.3mm X 25mm
iii. quantity	: 2
9. Hinges (Additional Test)	
Supplier	: Nico Manufacturing Ltd
Description	: 16" Restricted egress friction to bottom 16" Egress friction hinge top
Reference	: Restricted egress 8446 RES, Egress 8446
Quantity	: 1 of each
Fixing hinge to sash	
i. type	: Pan head pierce point
ii. size	: 4.8mm X 25mm
iii. quantity	: 4
Fixing hinge to frame	
i. type	: Pan head pierce point
ii. size	: 4.8mm X 25mm
iii. quantity	: 3

SCHEDULE OF COMPONENTS – SAMPLE 4

(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. Window casement (s)	
Overall Size	1200mm(w) X 1200mm(h)
Supplier	: CWG Choices Kommerling C70
Profile codes	: 7581-654
Material	: PVC
Sash framing section sizes	: 1148mm X 1148mm
Corner fixing method Type size quantity	: Weld
2. Window casement glass	
Supplier	:
Thickness	: 4-20-4
Overall size	: 1026mm X 1026mm
3. Window frame head	
Supplier	: Kommerling C70
Profile code	: 7502-654
Material	: PVC
Overall section size	: 1200mm
Fixing jamb to head joints	: Weld
Reinforcement	
i. position	: central
ii. profile code	: 676
iii. material	: Steel
iv. length	: 1056mm

<u>Item</u>	<u>Description</u>
4. Window frame jamb	
Supplier	: Kommerling C70
Profile code	: 7502-654
Material	: PVC
Overall section size	: 1200mm
Fixing jamb to sill joints	Weld
Reinforcement	
i. position	: Central
ii. profile code	: 676
iii. material	: Steel
iv. length	: 1056mm
5. Window frame sill	
Supplier	: Kommerling C70
Profile code	: 7502-654
Material	: PVC
Overall section size	: 1200mm
Reinforcement	
i. position	: Central
ii. profile code	: 676
iii. material	: Steel
iv. length	: 1056mm
6. Hinges	
Supplier	: Nico Manufacturing Ltd
Description	: 24" Restricted friction hinge
Reference	: 8360
Quantity	: 2
Fixing hinge to sash	
i. type	: Pan head pierce point
ii. size	: 4.8mm X 25mm
iii. quantity	: 4
Fixing hinge to frame	
i. type	: Pan head pierce point
ii. size	: 4.8mm X 25mm
iii. quantity	: 3
7. Restrictor	
Supplier	: Nico Manufacturing Ltd
Description	: Restrictor safety catch
Reference	: 6000(catch), 6017(striker)
Fixing restrictor to sash	
i. type	: Countersunk pierce point
ii. size	: 4.3mm X 25mm
iii. quantity	: 2
Fixing restrictor to frame	
i. type	: Countersunk pierce point
ii. size	: 4.3mm X 25mm
iii. quantity	: 2

SCHEDULE OF COMPONENTS – SAMPLE 5

(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. Window casement (s)	
Overall Size	1200mm x 1200mm
Supplier	: Seal-Lite group Swish 24/7
Profile codes	: X844
Material	: PVC
Sash framing section sizes	1136mm x 1136mm
Corner fixing method Type size quantity	: Weld
Reinforcement	
i. position	: Bottom (lockside) Top & Sides
ii. profile code	: S844 RCM 839
iii. material	: Steel Recycled composite material
iv. length	: 991mm 991mm
2. Window casement glass	
Supplier	: DB Glass
Thickness	: 4-20-4
Overall size	1018mm x 1018mm
3. Window frame head	
Supplier	: Swish 24/7
Profile code	: X841
Material	: PVC
Overall section size	: 1200mm
Fixing jamb to head joints	: Weld
4. Window frame jamb	
Supplier	: Swish 24/7
Profile code	: X841
Material	: PVC
Overall section size	: 1200mm
Fixing jamb to sill joints	: Weld

<u>Item</u>	<u>Description</u>
5. Window frame sill	
Supplier	: Swish 24/7
Profile code	: X841
Material	: PVC
Overall section size	: 1200mm
Reinforcement	: None
6. Hinges	
Supplier	: Nico Manufacturing Ltd
Description	: 24" Restricted Friction hinge
Reference	: 8360
Quantity	: 2
Fixing hinge to sash	
i. type	: Pan head pierce point
ii. size	: 4.8mm X 25mm
iii. quantity	: 4
Fixing hinge to frame	
i. type	: Pan head pierce point
ii. size	: 4.8mm X 25mm
iii. quantity	: 3
7. Restrictor	
Supplier	: Nico Manufacturing Ltd
Description	: Restrictor safety catch
Reference	: 6000 (catch), 6017 (striker)
Fixing restrictor to sash	
i. type	: Countersunk pierce point
ii. size	: 4.3mm X 25mm
iii. quantity	: 2
Fixing restrictor to frame	
i. type	: Countersunk pierce point
ii. size	: 4.3mm X 25mm
iii. quantity	: 2

SCHEDULE OF COMPONENTS – SAMPLE 6

(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. Window casement (s)	
Overall Size	1200mm(w) X 1200mm(h)
Supplier	: Wakefield Metroglaze LB Sheerframe 7000
Profile codes	: SK7723
Material	: PVC
Sash framing section sizes	: 1138mm(w) X 1136mm(h)
Corner fixing method Type size quantity	: Weld
Reinforcement	
i. position	: Central on each side
ii. profile code	: FP8821
iii. material	: PVC
iv. length	: 1027(w) X 1025(h)
2. Window casement glass	
Supplier	:
Thickness	: 4-20-4
Overall size	: 1022mm(w) X 1020mm(h)
3. Window frame head	
Supplier	: LB Sheerframe 7000
Profile code	: SK7702
Material	: PVC
Overall section size	: 1200mm
Fixing jamb to head joints	:
i. type	: Weld
Reinforcement	
i. position	: central
ii. profile code	: FP8824
iii. material	: PVC
iv. length	: 1050mm

<u>Item</u>	<u>Description</u>
4. Window frame jamb	
Supplier	: LB Sheerframe 7000
Profile code	: SK7702
Material	: PVC
Overall section size	: 1200mm
Fixing jamb to sill joints	
i. type	: Weld
Reinforcement	
i. position	: central
ii. profile code	: FP8824
iii. material	: PVC
iv. length	: 1050mm
5. Window frame sill	
Supplier	: LB Sheerframe 7000
Profile code	: SK7702
Material	: PVC
Overall section size	: 1200mm
Reinforcement	
i. position	: central
ii. profile code	: FP8824
iii. material	: PVC
iv. length	: 1050mm
6. Hinges	
Supplier	: Nico Manufacturing Ltd
Description	: 24" Restricted friction hinge
Reference	: 7960
Quantity	: 2
Fixing hinge to sash	
i. type	: Pan head pierce point
ii. size	: 4.8mm X 25mm
iii. quantity	: 4
Fixing hinge to frame	
i. type	: Pan head pierce point
ii. size	: 4.8mm X 25mm
iii. quantity	: 3
7. Restrictor	
Supplier	: Nico Manufacturing Ltd
Description	: Restrictor safety catch
Reference	: 6000 (catch), 6013 (striker)
Fixing restrictor to sash	
i. type	: Countersunk pierce point
ii. size	: 4.3mm X 25mm
iii. quantity	: 2
Fixing restrictor to frame	
i. type	: Countersunk pierce point
ii. size	: 4.3mm X 25mm
iii. quantity	: 2

SCHEDULE OF COMPONENTS – SAMPLE 7

(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. Window casement (s)	
Overall Size	: 700 x 1300 mm
Supplier	: Wakefield Metroglaze LB Sheerframe 7000
Profile codes	: SK7723
Material	: PVC
Sash framing section sizes	: 636mm(w) X 1238mm(h)
Corner fixing method Type size quantity	: Weld
Reinforcement	
i. position	: Central each side
ii. profile code	: FP8821
iii. material	: PVC
iv. length	: Top & bottom 525mm, sides 1127mm
2. Window casement glass	
Supplier	:
Thickness	: 4-20-4
Overall size	: 520mm(w) X 1122mm(h)
3. Window frame head	
Supplier	: LB Sheerframe 7000
Profile code	: SK7702
Material	: PVC
Overall section size	: 700mm
Fixing jamb to head joints	:
i. type	: Weld
Reinforcement	
i. position	: central
ii. profile code	: FP8824
iii. material	: PVC
iv. length	: 550mm

<u>Item</u>	<u>Description</u>
4. Window frame jamb	
Supplier	: LB Sheerframe 7000
Profile code	: SK7702
Material	: PVC
Overall section size	: 1300mm
Fixing jamb to sill joints	
i. type	: Weld
Reinforcement	
i. position	: central
ii. profile code	: FP8824
iii. material	: PVC
iv. length	: 1150mm
5. Window frame sill	
Supplier	: LB Sheerframe 7000
Profile code	: SK7702
Material	: PVC
Overall section size	: 700mm
Reinforcement	
i. position	: central
ii. profile code	: FP8824
iii. material	: PVC
iv. length	: 550mm
6. Hinges	
Supplier	: Nico Manufacturing Ltd
Description	: 16" Restricted friction hinge to bottom 16" Standard friction hinge to top
Reference	: Restricted 7940, Standard 7740.
Quantity	: 1 of each
Fixing hinge to sash	
i. type	: Pan head pierce point
ii. size	: 4.8mm X 25mm
iii. quantity	: 3
Fixing hinge to frame	
i. type	: Pan head pierce point
ii. size	: 4.8mm X 25mm
iii. quantity	: 3

Item**Description****7. Hinges (Additional test)**

Supplier	:	Nico Manufacturing Ltd
Description	:	16" Restricted egress friction hinge to bottom 16" Egress hinge to top
Reference	:	Restricted Egress 8441 RES Egress 8441
Quantity	:	1 of each
Fixing hinge to sash		
i. type	:	Pan head pierce point
ii. size	:	4.8mm X 25mm
iii. quantity	:	4
Fixing hinge to frame		
i. type	:	Pan head pierce point
ii. size	:	4.8mm X 25mm
iii. quantity	:	3

8. Restrictor

Supplier	:	Nico Manufacturing Ltd
Description	:	Restrictor safety catch
Reference	:	
Fixing restrictor to sash		
i. type	:	Countersunk pierce point
ii. size	:	4.3mm X 25mm
iii. quantity	:	2
Fixing restrictor to frame		
i. type	:	Countersunk pierce point
ii. size	:	4.3mm X 25mm
iii. quantity	:	2

PERFORMANCE CRITERIA & TEST RESULTS

Clause	Result	Pass/Fail
4.8 Load-bearing capacity of safety devices	Both restrictors where engaged along each stile and a load 350N was applied to the centre of the bottom rail. The load was applied for 60 seconds before being removed. The restrictor continued to operate after the test.	PASS
Sample 1		
7760SE 24" top hung restricted hinge		
4.8 Load-bearing capacity of safety devices	The restrictor was engaged then a load of 350N was applied to leading edge of the restricted stile. The load was held for 60 seconds before being removed. The sample continued to operate after the test	PASS
Sample 2		
8340 16" Side hung restricted hinge		
4.8 Load-bearing capacity of safety devices	The restrictor was engaged then a load of 350N was applied to leading edge of the restricted stile. The load was held for 60 seconds before being removed. The sample continued to operate after the test	PASS
Sample 2		
8446 16" side hung restricted egress hinge		
4.8 Load-bearing capacity of safety devices	The restrictor was engaged then a load of 350N was applied to leading edge of the restricted stile. The load was held for 60 seconds before being removed. The sample continued to operate after the test	PASS
Sample 2		
6000 Latch		
6017 Catch Peg		

Clause	Result	Pass/Fail
4.8 Load-bearing capacity of safety devices Sample 3 8340 16" side hung restricted hinge	The restrictor was engaged then a load of 350N was applied to leading edge of the restricted stile. The load was held for 60 seconds before being removed. The sample continued to operate after the test	PASS
4.8 Load-bearing capacity of safety devices Sample 3 8446 16" side hung restricted egress hinge	The restrictor was engaged then a load of 350N was applied to leading edge of the restricted stile. The load was held for 60 seconds before being removed. The sample continued to operate after the test	PASS
4.8 Load-bearing capacity of safety devices Sample 3 6000 Latch 6017 Catch Peg	The restrictor was engaged then a load of 350N was applied to leading edge of the restricted stile. The load was held for 60 seconds before being removed. The sample continued to operate after the test	PASS
4.8 Load-bearing capacity of safety devices Sample 4 8360 24" top hung restricted hinge	Both restrictors where engaged along each stile and a load 350N was applied to the centre of the bottom rail. The load was applied for 60 seconds before being removed. The restrictor continued to operate after the test.	PASS

Clause	Result	Pass/Fail
4.8 Load-bearing capacity of safety devices Sample 4 6000 Latch 6017 Catch Peg	<p>The restrictor was engaged along one of the stiles. A load of 350N was applied to the leading edge of the restricted stile. The load was applied for 60 seconds before being removed. The restrictor continued to operate after the test. The same load was then applied to the unrestricted edge for 60 seconds, the restrictor continued to operate after the test.</p>	PASS
4.8 Load-bearing capacity of safety devices Sample 5 8360 24 top hung restricted hinge	<p>Both restrictors were engaged along each stile and a load 350N was applied to the centre of the bottom rail. The load was applied for 60 seconds before being removed. The restrictor continued to operate after the test.</p>	PASS
4.8 Load-bearing capacity of safety devices Sample 5 6000 Latch 6017 Catch Peg	<p>The restrictor was engaged along one of the stiles. A load of 350N was applied to the leading edge of the restricted stile. The load was applied for 60 seconds before being removed. The restrictor continued to operate after the test. The same load was then applied to the unrestricted edge for 60 seconds, the restrictor continued to operate after the test.</p>	PASS
4.8 Load-bearing capacity of safety devices Sample 6 7960 24" top hung restricted hinge	<p>Both restrictors were engaged along each stile and a load 350N was applied to the centre of the bottom rail. The load was applied for 60 seconds before being removed. The restrictor continued to operate after the test.</p>	PASS

Clause	Result	Pass/Fail
4.8 Load-bearing capacity of safety devices Sample 6 6000 Latch 6013 Catch Peg	<p>The restrictor was engaged along one of the stiles. A load of 350N was applied to the leading edge of the restricted stile. The load was applied for 60 seconds before being removed. The restrictor continued to operate after the test. The same load was then applied to the unrestricted edge for 60 seconds, the restrictor continued to operate after the test.</p>	PASS
4.8 Load-bearing capacity of safety devices Sample 7 7940 16" side hung restricted hinge	<p>The restrictor was engaged then a load of 350N was applied to leading edge of the restricted stile. The load was held for 60 seconds before being removed. The sample continued to operate after the test.</p>	PASS
4.8 Load-bearing capacity of safety devices Sample 7 8441 16" side hung restricted egress hinge	<p>The restrictor was engaged then a load of 350N was applied to leading edge of the restricted stile. The load was held for 60 seconds before being removed. The sample continued to operate after the test.</p>	PASS
4.8 Load-bearing capacity of safety devices Sample 7 6000 Latch 6017 Catch Peg	<p>The restrictor was engaged along one of the stiles. A load of 350N was applied to the leading edge of the restricted stile. The load was applied for 60 seconds before being removed. The restrictor continued to operate after the test. The same load was then applied to the unrestricted edge for 60 seconds, the restrictor continued to operate after the test.</p>	PASS

CONCLUSIONS

Evaluation against objective The sample as provided by the client was subjected to operational & strength testing in accordance with BS EN 14351-1:2006 and achieved the requirements of clause 4.8 Load-bearing capacity of safety devices.

Observations & comments

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 window assemblies covered by this report It is our opinion that the range of window assemblies covered by this report are limited to the following

- 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 The uncertainties of measurements calculated for a confidence level of 95% throughout these tests are within the limits of these tolerances.

The standard specifies the following tolerances

- 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