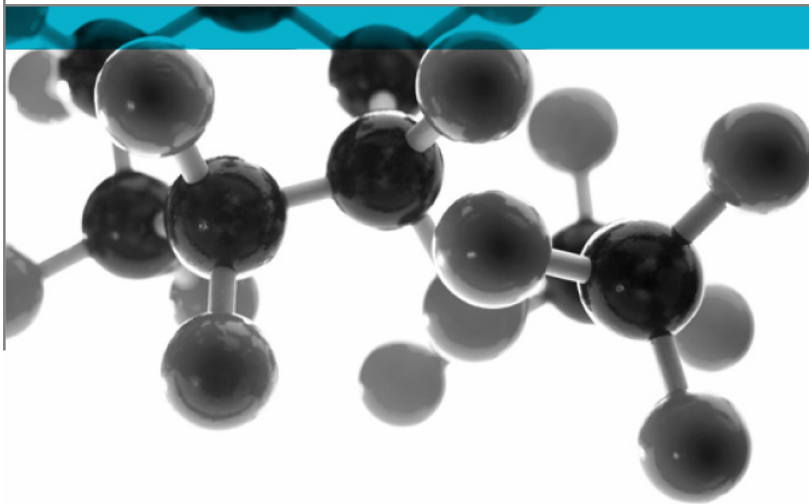


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BS EN 14351-1:2006



Test of: Various windows fitted with restrictors

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

A Report To: Nico Manufacturing Ltd

Document Reference: WIL 330287

Date: 29/07/2013

Copy: 1

Issue No.: 2

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 31762
 Dated 14/06/2013

SAMPLE DETAILS

Product Various top hung and side hung window
 Model 8340 16" Side hung restricted stay
 7940 16" Side hung restricted stay
 8360 24" Top hung restricted stay
 7960 24" Top hung restricted stay
 6000 Latch and 6017 catch peg & 6013 catch peg
 Window Various
 Manufacturers
 Restrictor Nico Manufacturing Ltd
 Manufacture
 Frame Dimensions 700x 1300mm Windows 1,2,3,4,5 and 6
 1200 x 120 mm Windows 7,8,9,10,11 and 12
 Sash Dimensions 635 x 1235 mm Windows 1,2,4,5 and 6
 630 x 1215 mm Window 3
 1135 x 1135 mm Windows 7,9,10,11 and 12
 1125 x 1125 mm Window 8
 Material PVC-u windows 1,2,4,5,6,7,9,10,11 and 12
 Timber windows 3 and 8
 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 to clauses
 Test Method BS EN 14609:2004 strength of safety devices
 Sample received 14/06/2013
 Test started 14/06/2013
 Test completed 14/06/2013
 Special Test
 requirements None
 Other reports to be
 used in conjunction
 with this report None

Document No.: WIL 330287

Page No.: 5 of 49

Author: C Bryan

Issue Date: 29/07/2013

Client: Nico Manufacturing Ltd

Issue No.: 02

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 14th June 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 19.1-25.2°C and 36.1-51.1% humidity for the duration of the test.</p>

INITIAL OBSERVATIONS

The External face
of sample 1 and
restrictor

New Trade
windows Bristol

Spectus Elite 70

8340 16" Side
hung restricted
hinge



**The External face
of sample 2 and
restrictor**

Consort Ltd

**VEKA Matrix 70
Sculptured
window**

**7940 16" side
hung restricted
hinge**



**The External face
of sample 3 and
restrictor**

**Affordable
Timber Windows**

**Timber side hung
window**

**7940 16" side
hung restricted
hinge**



**The External face
of sample 4 and
restrictor**

**Plymouth
Community
Homes**

**Synseal legend
70**

**8340 16" side
hung restricted
hinge**



**The External face
of sample 5 and
restrictor**

**Pioneer Trading
Company**

Synseal synerjy

**7940 16" side
hung restricted
hinge**



The External face
of sample 6 and
restrictor

Majestic
Windows

Duraflex Diomand

7940 16" side
hung restricted
hinge



**The External face
of sample 7 and
restrictor**

**New trade
Windows Bristol**

Spectus Elite 70

**8360 24" top
hung restricted
hinge**

**6000 latch and
6017 catch peg**



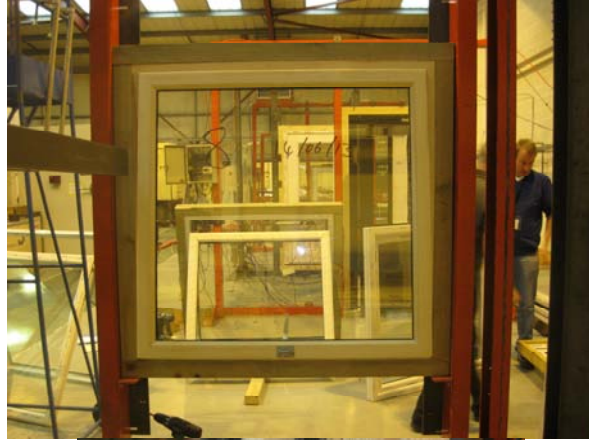
**The External face
of sample 8 and
restrictors**

**Affordable
Timber Windows**

**Timber top hung
window**

**7960 24" top
hung restricted
hinge**

**6000 latch and
6013 catch peg**



The External face
of sample 9 and
restrictors

Plymouth
Community
Homes

Synseal legend
70

8360 24" top
hung restricted
hinge

6000 latch and
6017 catch peg



**The External face
of sample 10 and
restrictors**

**Pioneer Trading
Company**

Synseal shield

**7960 24" top
hung restricted
hinge**

**6000 latch and
6013 catch peg**



**The External face
of sample 11 and
restrictors**

**Majestic
Windows**

Duraflex diamond

**7960 24" top
hung restricted
hinge**

**6000 latch and
6013 catch peg**



**The External face
of sample 12 and
restrictors**

Consort Ltd

**VEKA Matrix 70
Sculptured**

**7960 24" top
hung restricted
hinge**

**6000 latch and
6013 catch peg**



Do not scale. All dimensions are in mm

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	700mm(w) X 1300mm(h)
Supplier	: New Trade Windows Bristol Spectus Elite 70
Profile codes	B30
Material	: PVC
Sash framing section sizes	636mm(w) X 1236mm(h)
Corner fixing method Type size quantity	: Weld
Reinforcement	None
2. Window casement glass	
Supplier	: Armour Sealed Units Ltd
Thickness	: 4-20-4
Overall size	516mm X 1236mm
3. Window frame head	
Supplier	: Spectus Elite 70
Profile code	: B02
Material	: PVC
Density	: kg/m ³ (stated)
Overall section size	: 700mm
Fixing jamb to head joints	: Weld
Reinforcement	None
4. Window frame jamb	
Supplier	: Spectus Elite 70
Profile code	: B02
Material	: PVC
Density	: kg/m ³ (stated)
Overall section size	: 1300mm
Fixing jamb to sill joints	Weld
Reinforcement	None
5. Window frame sill	
Supplier	: Spectus Elite 70
Profile code	: B02
Material	: PVC
Overall section size	: 700mm
Reinforcement	None

Item**Description****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 drill point
ii. size	:	4.3mm X 25mm
iii. quantity	:	3
Fixing hinge to frame		
i. type	:	Pan head drill point
ii. size	:	4.3mm 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 drill point
ii. size	:	3.9mm X 25mm
iii. quantity	:	2
Fixing restrictor to frame		
i. type	:	Countersunk drill point
ii. size	:	3.9mm X 25mm
iii. quantity	:	2

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

Item	Description
1. Window casement (s)	
Overall Size	700mm(w) X 1300mm(h)
Supplier	: Consort Limited Veka Matrix 70
Profile codes	103264
Material	: PVC
Sash framing section sizes	643mm(w) X 1243mm(h)
Corner fixing method Type size quantity	: Weld
Reinforcement	None
2. Window casement glass	
Supplier	: Clayton Glass Ltd
Thickness	: 4-20-4
Overall size	521mm(w) X 1121mm(h)
3. Window frame head	
Supplier	: Veka Matrix 70
Profile code	: 101160
Material	: PVC
Density	: kg/m ³ (stated)
Overall section size	: 700mm
Rebate	: 700mm
Fixing jamb to head joints	: Weld
Reinforcement	None
4. Window frame jamb	
Supplier	: Veka Matrix 70
Profile code	: 101160
Material	: PVC
Density	: kg/m ³ (stated)
Overall section size	: 1300mm
Fixing jamb to sill joints	Weld
Reinforcement	None
5. Window frame sill	
Supplier	: Veka Matrix 70
Profile code	: 101160
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 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
7. Restrictor	None

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	: Affordable Timber Windows
	Stormproof casement window
Material	: Redwood
Sash framing section sizes	70mm x 57mm,
Corner fixing method Type size quantity	: Mortise and tenon
Rebate	40mm X 17mm
2. Window casement glass	
Supplier	: NS Glass
Thickness	: 4-16-4
Overall size	516mm(w) X 1104mm(h)
3. Window frame head	
Supplier	: Affordable Timber Windows
Profile code	:
Material	: Redwood
Density	: 550kg/m ³ (stated)
Overall section size	: 66mm X 70mm
Rebate	: 42mm X 18mm
Fixing jamb to head joints	:
i. type	: Mortise
ii. size	: 40mm X 40mm X 20mm
iii. quantity	: 2
Adhesive	
i. supplier	: kleiberit
ii. reference	D3 Glue 303

<u>Item</u>	<u>Description</u>
4. Window frame jamb	
Supplier	: Affordable Timber Windows
Profile code	:
Material	: Redwood
Density	: 550kg/m ³ (stated)
Overall section size	: 66mm X 58mm
Rebate	: 42mm X 18mm
Fixing jamb to sill joints	
i. type	: Tenon
ii. material	: 40mm X 40mm X 20mm
iv. quantity	: 2
Adhesive	
i. Supplier	: Kleiberit
ii. reference	: D3 Glue 303
5. Window frame sill	
Supplier	: Affordable Timber Windows
Profile code	:
Material	: Redwood
Density	: 550kg/m ³ (stated)
Overall section size	: 66mm X 58mm
Rebate	: 42mm X 18mm
Adhesive	
i. Supplier	: Kleiberit
ii. reference	: D3 Glue 303
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	: Countersunk pierce point
ii. size	: No 6 X 11/2"
iii. quantity	: 3
Fixing hinge to frame	
i. type	: Countersunk pierce point
ii. size	: No 6 X 11/2"
iii. quantity	: 3
7. Restrictor	
	: None

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	700mm(w) X 1300mm(h)
Supplier	: Plymouth Community Homes Services Synseal Legend 70
Profile codes	5V8M
Material	: PVC
Sash framing section sizes	640mm(w) X 1240mm(h)
Corner fixing method Type size quantity	: Weld
Reinforcement	None
2. Window casement glass	
Supplier	: Premier DGU
Thickness	: 4-20-4
Overall size	512mm(w) X 1112mm(h)
3. Window frame head	
Supplier	: Synseal Legend 70
Profile code	: 5F5M
Material	: PVC
Overall section size	: 700mm
Fixing jamb to head joints	: Weld
Reinforcement	None
4. Window frame jamb	
Supplier	: Synseal Legend 70
Profile code	: 5F5M
Material	: PVC
Density	: kg/m ³ (stated)
Overall section size	: 1300mm
Fixing jamb to sill joints	: Weld
Reinforcement	None
5. Window frame sill	
Supplier	: Synseal Legend 70
Profile code	: 5F5M
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 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	: 3
Fixing hinge to frame	
i. type	: Pan head pierce point
ii. size	: 4.8mm X 25mm
iii. quantity	: 3
7. Restrictor	None

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	700mm(w) X 1300mm(h)
Supplier	: Pioneer Trading Company Essex Ltd
	Synseal Synerjy
Profile codes	4V2M
Material	: PVC
Sash framing section sizes	654mm(w) X 1254mm(h)
Corner fixing method Type size quantity	: Weld
Reinforcement	None
2. Window casement glass	
Supplier	: Village Glass
Thickness	: 4-20-4
Overall size	528mm(w) X 1128mm(h)
3. Window frame head	
Supplier	: Synseal Synerjy
Profile code	: 4F1M
Material	: PVC
Overall section size	: 700mm
Fixing jamb to head joints	: Weld
Reinforcement	None
4. Window frame jamb	
Supplier	: Synseal Synerjy
Profile code	: 4F1M
Material	: PVC
Overall section size	: 1300mm
Fixing jamb to sill joints	: Weld
Reinforcement	None
5. Window frame sill	
Supplier	: Synseal Synerjy
Profile code	: 4F1M
Material	: PVC
Overall section size	: 700mm
Reinforcement	None

Item**Description****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	:	4.3mm X 25mm
iii. quantity	:	3
Fixing hinge to frame		
i. type	:	Pan head pierce point
ii. size	:	4.3mm X 25mm
iii. quantity	:	3

7. Restrictor

None

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	700mm(w) X 1300mm(h)
Supplier	: Majestic Windows Duraflex Diamond
Profile codes	: 6560W50
Material	: PVC
Sash framing section sizes	: 632mm(w) X 1232mm(h)
Corner fixing method Type size quantity	: Weld
Reinforcement	: None
2. Window casement glass	
Supplier	: DB Glass
Thickness	: 4-20-4
Overall size	: 516mm(w) X 1116mm(h)
3. Window frame head	
Supplier	: Duraflex Diamond
Profile code	: 6501W50
Material	: PVC
Density	: kg/m ³ (stated)
Overall section size	: 700mm
Fixing jamb to head joints	: Weld
Reinforcement	: None
4. Window frame jamb	
Supplier	: Duraflex Diamond
Profile code	: 6501W50
Material	: PVC
Density	: kg/m ³ (stated)
Overall section size	: 1300mm
Fixing jamb to sill joints	: Weld
Reinforcement	: None
5. Window frame sill	
Supplier	: Duraflex Diamond
Profile code	: 6501W50
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 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	: 4.3mm X 25mm
iii. quantity	: 3
Fixing hinge to frame	
i. type	: Pan head pierce point
ii. size	: 4.3mm X 25mm
iii. quantity	: 3
7. Restrictor	None

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	1200mm X 1200mm	
Supplier	: New Trade Windows Bristol	Spectus Elite 70
Profile codes	B30	
Material	: PVC	
Density	: kg/m ³ (stated)	
Sash framing section sizes	1141mm X 1141mm	
Corner fixing method Type size quantity	: Weld	
Reinforcement	None	
2. Window casement glass		
Supplier	: Armour Sealed Units Ltd	
Thickness	: 4-20-4	
Overall size	1016mm X 1016mm	
3. Window frame head		
Supplier	: Spectus Elite 70	
Profile code	: B02	
Material	: PVC	
Overall section size	: 1200mm	
Fixing jamb to head joints	: weld	
Reinforcement	None	
4. Window frame jamb		
Supplier	: Spectus Elite 70	
Profile code	: B02	
Material	: PVC	
Overall section size	: 1200mm	
Fixing jamb to sill joints	Weld	
Reinforcement	None	
5. Window frame sill		
Supplier	: Spectus Elite 70	
Profile code	: B02	
Material	: PVC	
Overall section size	: 1200mm	
Reinforcement	None	

<u>Item</u>	<u>Description</u>
6. Hinges	
Supplier	: Nico Manufacturing Ltd
Description	: 24" Restricted friction hinge
Reference	: 8360
Quantity	: 2
Fixing hinge to sash	
i. type	: Pan head drill point
ii. size	: 4.3mm X 25mm
iii. quantity	: 4
Fixing hinge to frame	
i. type	: Pan head drill point
ii. size	: 4.3mm X 25mm
iii. quantity	: 3
7. Restrictor	
Supplier	: Nico Manufacturing Ltd
Description	: Restrictor safety catch
Reference	: 6000(catch), 6017(striker)
Fixing restrictor to sash	
iv. type	: Countersunk drill point
v. size	: 3.9mm X 25mm
vi. quantity	: 2
Fixing restrictor to frame	
iv. type	: Countersunk drill point
v. size	: 3.9mm X 25mm
vi. quantity	: 2

SCHEDULE OF COMPONENTS – SAMPLE 8

(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	: Affordable Timber Windows Stormproof casement Window
Material	: Timber
Density	: 550kg/m ³ (stated)
Sash framing section sizes	70mm x 57mm,
Corner fixing method Type size quantity	: Mortise and tenon
Rebate	40mm X 17mm
2. Window casement glass	
Supplier	: NS Glass
Thickness	: 4-16-4
Overall size	1016mm(w) X 1004mm(h)
3. Window frame head	
Supplier	: Affordable Timber Windows
Material	: Timber
Density	: 550kg/m ³ (stated)
Overall section size	: 66mm X 70mm
Rebate	: 42mm X 18mm
Fixing jamb to head joints	:
i. type	: Mortise
ii. size	: 40mm X 40mm X 20mm
iii. quantity	: 2
4. Window frame jamb	
Supplier	: Affordable Timber Windows
Material	: Timber
Density	: 550kg/m ³ (stated)
Overall section size	: 66mm X 58mm
Rebate	: 42mm X 18mm
Fixing jamb to sill joints	:
i. type	: Tenon
iii. size	: 40mm X 40mm X 20mm
iv. quantity	: 2

<u>Item</u>	<u>Description</u>
5. Window frame sill	
Supplier	: Affordable Timber Windows
Material	: Timber
Density	: 550kg/m ³ (stated)
Overall section size	: 66mm X 58mm
Rebate	: 42mm X 18mm
6. Hinges	
Supplier	: Nico Manufacturing Ltd
Description	: 24" Restricted friction hinge
Reference	: 7960
Quantity	: 2
Fixing hinge to sash	
i. type	: Countersunk pierce point
ii. size	: No 6 X 11/2"
iii. quantity	: 4
Fixing hinge to frame	
i. type	: Countersunk pierce point
ii. size	: No 6 X 11/2"
iii. quantity	: 3
7. Restrictor	
Supplier	: Nico Manufacturing Ltd
Description	: Restrictor safety catch
Reference	: 6000(catch), 6013(striker)
Fixing restrictor to sash	
vii. type	: Countersunk pierce point
viii. size	: No 6 X 11/2"
ix. quantity	: 2
Fixing restrictor to frame	
vii. type	: Countersunk pierce point
viii. size	: No 6 X 11/2"
ix. quantity	: 2

SCHEDULE OF COMPONENTS – SAMPLE 9

(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	: Plymouth Community Homes Services Synseal Legend 70
Profile codes	5V8m
Material	: PVC
Sash framing section sizes	1134mm(w) X 1134mm(h)
Corner fixing method Type size quantity	: Weld
Reinforcement	None
2. Window casement glass	
Supplier	: Premier DGU
Thickness	: 4-20-4
Overall size	1012mm(w) X 1012mm(h)
3. Window frame head	
Supplier	: Synseal Legend 70
Profile code	: 5F5M
Material	: PVC
Density	: kg/m ³ (stated)
Overall section size	: 1200mm
Fixing jamb to head joints	: Weld
Reinforcement	None
4. Window frame jamb	
Supplier	: Synseal Legend 70
Profile code	: 5F5M
Material	: PVC
Overall section size	: 1200mm
Fixing jamb to sill joints	: Weld
Reinforcement	None
5. Window frame sill	
Supplier	: Synseal Legend 70
Profile code	: 5F5M
Material	: PVC
Overall section size	: 1200mm
Reinforcement	None

Item**Description****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	:	4.3mm X 25mm
iii. quantity	:	4
Fixing hinge to frame		
i. type	:	Pan head pierce point
ii. size	:	4.3mm X 25mm
iii. quantity	:	3

7. Restrictor

Supplier	:	Nico Manufacturing Ltd
Description	:	Restrictor security 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 10

(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	: Pioneer Trading Company Essex Synseal Shield
Profile codes	V72M
Material	: PVC
Sash framing section sizes	1155mm(w) X 1155mm(h)
Corner fixing method Type size quantity	: Weld
Reinforcement	None
2. Window casement glass	
Supplier	: Village Glass
Thickness	: 4-20-4
Overall size	1034mm(w) X 1034mm(h)
3. Window frame head	
Supplier	: Synseal Shield
Profile code	: F71M
Material	: PVC
Overall section size	: 1200mm
Fixing jamb to head joints	: Weld
Reinforcement	None
4. Window frame jamb	
Supplier	: Synseal Shield
Profile code	: F71M
Material	: PVC
Overall section size	: 1200mm
Fixing jamb to sill joints	: Weld
Reinforcement	None
5. Window frame sill	
Supplier	: Synseal Shield
Profile code	: F71M
Material	: PVC
Overall section size	: 1200mm
Reinforcement	None

Item**Description****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	:	4.3mm X 25mm
iii. quantity	:	4
Fixing hinge to frame		
i. type	:	Pan head pierce point
ii. size	:	4.3mm 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 11

(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	: Majestic Windows Duraflex Diamond
Profile codes	6560W50
Material	: PVC
Density	: kg/m ³ (stated)
Sash framing section sizes	1135mm(w) X 1135mm(h)
Corner fixing method Type size quantity	: Weld
Reinforcement	None
i. position	:
ii. profile code	:
iii. material	:
iv. density	: kg/m ³ (stated)
v. length	:
2. Window casement glass	
Supplier	: DB Glass
Thickness	: 4-20-4
Overall size	1017mm(w) X 1014mm(h)
3. Window frame head	
Supplier	: Duraflex Diamond
Profile code	: 6501W50
Material	: PVC
Overall section size	: 1200mm
Rebate	:
Fixing jamb to head joints	: Weld
Reinforcement	None
4. Window frame jamb	
Supplier	: Duraflex Diamond
Profile code	: 6501W50
Material	: PVC
Overall section size	: 1200mm
Fixing jamb to sill joints	Weld
Reinforcement	None

<u>Item</u>	<u>Description</u>
5. Window frame sill	
Supplier	: Duraflex Diamond
Profile code	: 6501w50
Material	: PVC
Overall section size	: 1200mm
Reinforcement	: None
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	: 4.3mm X 25mm
iii. quantity	: 4
Fixing hinge to frame	
i. type	: Pan head pierce point
ii. size	: 4.3mm 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 12

(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	: Consort Limited Veka Matrix 70
Profile codes	103264
Material	: PVC
Sash framing section sizes	1143mm(w) X 1143mm(h)
Corner fixing method Type size quantity	: Weld
Reinforcement	
i. position	: Central on each side
ii. profile code	: 113.372
iii. material	: Steel
iv. density	: kg/m ³ (stated)
v. length	: 993mm
2. Window casement glass	
Supplier	: Clayton Glass Ltd
Thickness	: 4-20-4
Overall size	1021mm9w) X 1021mm(h)
3. Window frame head	
Supplier	: Veka Matrix 70
Profile code	: 101160
Material	: PVC
Overall section size	: 1200mm
Rebate	:
Fixing jamb to head joints	: Weld
Reinforcement	None
4. Window frame jamb	
Supplier	: Veka Matrix 70
Profile code	: 101160
Material	: PVC
Overall section size	: 1200mm
Fixing jamb to sill joints	: Weld
Reinforcement	None

<u>Item</u>	<u>Description</u>
5. Window frame sill	
Supplier	: Veka Matrix 70
Profile code	: 101160
Material	: PVC
Overall section size	: 1200mm
Rebate	
Reinforcement	None
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

PERFORMANCE CRITERIA & TEST RESULTS

Clause	Result	Pass/Fail
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 1		
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		
7940 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 3		
7940 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 4		
8340 16" side hung restricted hinge		

Clause	Result	Pass/Fail
4.8 Load-bearing capacity of safety devices Sample 5 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 6 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 8360 24" top hung restricted hinge	<p>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.</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 the applied to the leading edge of the restricted stile. The load was applied for 60 seconds before being removed. The restrictor continued you to operate after the test. The same load was then applied to the un restricted edge for 60 seconds, the restrictor continued to operate after the test.</p>	PASS

Clause	Result	Pass/Fail
4.8 Load-bearing capacity of safety devices Sample 8 7960 24" top hung restricted hinge	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.	PASS
4.8 Load-bearing capacity of safety devices Sample 8 6000 Latch 6013 Catch Peg	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.	PASS
4.8 Load-bearing capacity of safety devices Sample 9 8360 24" top hung restricted hinge	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.	PASS
4.8 Load-bearing capacity of safety devices Sample 9 6000 Latch 6017 Catch Peg	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.	PASS

Clause	Result	Pass/Fail
4.8 Load-bearing capacity of safety devices Sample 10 7960 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
4.8 Load-bearing capacity of safety devices Sample 10 6000 Latch 6013 Catch Peg	The restrictor was engaged along one of the stiles. A load of 350N was the applied to the leading edge of the restricted stile. The load was applied for 60 seconds before being removed. The restrictor continued you to operate after the test. The same load was then applied to the un restricted edge for 60 seconds, the restrictor continued to operate after the test.	PASS
4.8 Load-bearing capacity of safety devices Sample 11 7960 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
4.8 Load-bearing capacity of safety devices Sample 11 6000 Latch 6013 Catch Peg	The restrictor was engaged along one of the stiles. A load of 350N was the applied to the leading edge of the restricted stile. The load was applied for 60 seconds before being removed. The restrictor continued you to operate after the test. The same load was then applied to the un restricted edge for 60 seconds, the restrictor continued to operate after the test	PASS

Clause	Result	Pass/Fail
4.8 Load-bearing capacity of safety devices Sample 12 7960 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
4.8 Load-bearing capacity of safety devices Sample 12 6000 Latch 6013 Catch Peg	The restrictor was engaged along one of the stiles. A load of 350N was the applied to the leading edge of the restricted stile. The load was applied for 60 seconds before being removed. The restrictor continued you to operate after the test. The same load was then applied to the un restricted edge for 60 seconds, the restrictor continued to operate after the test.	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 : 02	Re - Issue Date : 03/07/2013
Revised By: C. Bryan	Approved By: C. Bryan
Reason for Revision: Amendment of sample details	

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

END OF REPORT