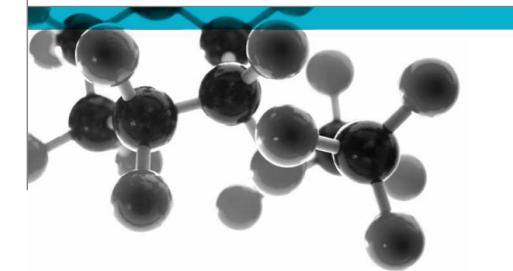
Exova Warringtonfire KeyIndustrial Park Fernside Road Willenhall West Midlands WV13 3YA T : +44 (0) 1902 722 122 F : +44 (0) 1902 727 242 E : willenhall@exova.com W: <u>www.exova.com</u>



BS EN 14351-1:2006



Test of: Window restrictors

Windows and doors – Product standard, performance characteristics

A Report To: Nico Manufacturing Ltd

Document Reference: WIL 328855

Date:14/06/2013

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Page 1





Registered Office: Exova (UK) Ltd, Lochend Industrial Estate, Newbridge, Midlothian EH28 8PL United Kingdom. Reg No.SC 70429 This report in issued in accordance with our terms and conditions, a copy of which is available on request.



TEST CONCLUSIONS

Samples of: Manufacturer Nico Manufacturing Ltd Product Window Restricotrs Model 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

Author:

Client:

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AUTHORISATION

Tests performed by: Mark Garfield, Test Engineer

Report issued by: Mark Garfield, Test Engineer

Signed 10

Date 14/06/13

For and on behalf of Exova Warringtonfire

Report authorised by: Mark West, Assistant Operations Manager

Signed

Date 14/06/13

For and on behalf of Exova Warringtonfire

Report issued: 14 June 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 Warringtonfireis an EC Notified Body Number 1104

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EXOV Warringtonfire

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Exova Warringtonfire

TEST DETAILS

CLIENT DETAILS

Nico Manufacturing Ltd Oxford road Clacton on sea Essex
CO15 3TJ
Duncan Kury

ORDER DETAILS

Order number Dated

SAMPLE DETAILS

Product		Window restrictors			
Model		7940, 7960, 8340, 8360, 6000/6013 and 6000/6017			
Manufacturer		Sample 3 Du Sample 4 Wi	antum Window		Sample 6 Quantum Windows Sample 7 DEM Sample 8 Windowbuild Sample 9 Selecta Sample 10 Quantum Windows
Frame Dimen	sions	Sample 2 120 Sample 3 120 Sample 4 120	00mm x 1200n 00mm x 1200n 00mm x 1200n 00mm x 1200n 00mm x 1200n	וm וm וm	Sample 6 700mm x 1300mm Sample 7 700mm x 1303mm Sample 8 698mm x 1298mm Sample 9 700mm x 1300mm Sample 10 700mm x 1301mm
Sash Dimens	ions	Sample 2 113 Sample 3 114 Sample 4 113 Sample 5 114	45mm x 1143r 35mm x 1135n 45mm x 1145n 30mm x 1133n 43mm x 1140n	וד וד וד	Sample 6 635mm x 1255mm Sample 7 644mm x 1244mm Sample 8 631mm x 1230mm Sample 9 645mm x 1245mm Sample 10 645mm x 1242mm
Material		Sample 1 PV Sample 2 PV Sample 3 PV Sample 4 PV Sample 5 Alu	и́С и́С и́С		Sample 6 PVC Sample 7 PVC Sample 8 PVC Sample 9 PVC Sample 10 Aluminium
Details of Har Hinges Hinge protect Lock Markings Date of Manu Other informa	ion facture	Nico Nico Various None Unknown None			
•		BS EN 14351 Yes	1 :2006		
		BS EN 14609	9:2004 strength	of safety	devices
Sample received 0		02/05/13			
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Test started02/05/13Test completed02/05/13

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

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TEST PROCEDURE

Introduction	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.
	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.
Instruction To	The test was conducted on the 02/05/13 on behalf of Nico Manufacturing Ltd.
Test	Mr Duncan Kury, a representative of Nico Manufacturing Ltd witnessed the test.
	Initial requirement was as defined in BS6375-2, requiring a performance of a threshold value of 350N for load-bearing capacity of safety devices.
Test Specimen Construction	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.
Sampling	The samples were not independently witnessed or selected and were provided direct from the test sponsor.
Installation	The sample was supplied mounted within a timber sub-frame of nominal section 75mm \times 100mm fitted flush with the exterior face, in accordance with the clients fitting instructions.
Test Climate	The sample was conditioned in the laboratory in the range 10-30 $^\circ C$ and 25-75% humidity.

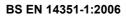
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INITIAL OBSERVATIONS

Sample 1



Sample 2

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Sample 3



Sample 4



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Sample 5



Sample 6



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Sample 7





Sample 8

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Sample 9



Sample 10



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Restrictor 6000/6013



Restrictor 6000/6017



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SCHEDULE OF COMPONENTS

Sample 1

<u>Item</u>

Description

1. Window	casement (s)		
Overall Size			1200 x 1200 mm
Supplier		:	DEM Windows
Profile codes	;		Halo Eclipse P50208 SASLI
Material		:	PVC
Density		:	kg/m ³ (stated)
Sash framing	section sizes		1143 x 1143 mm
Corner fixing	method Type size quar	ntity :	Welded
Reinforceme	nt		
i. position		:	All
ii. profile c	ode	:	S141139
iii. material		:	Steel
iv. density		:	kg/m ³ (stated)
v. length		:	981 x 981mm
2. Window	casement glass		
Supplier	-	:	Glass craft
Thickness		:	28mm
Overall size			1021 x 1021mm
3. Window	frame head		
Supplier		:	DEM/ Halo Eclipse
Profile code		:	P50201
Material		:	PVC
Density		:	kg/m ³ (stated)
Overall section	on size	:	1200
Rebat	е	:	
Fixing jamb t	o head joints	:	
i. type	,	:	Welded
ii. size		:	
iii. quantity		:	
Reinforceme	nt		
i. position		:	All
ii. profile c	ode		S41101
iii. material		:	Steel
iv. density		:	kg/m ³ (stated)
v. length		:	1078mm
4. Window	frame iamb		
Supplier		:	DEM/ Halo eclipse
Profile code		:	P50201
Material			PVC
Density			kg/m ³ (stated)
Overall section size			1200mm
Rebate			
Fixing jamb t	o sill ioints	•	
i. type			Welded
ii. material		÷	
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Description

iii. size : iv. quantity : Reinforcement position All i. S41101 ii. profile code iii. material Steel kg/m³ (stated) iv. density : v. length 1078mm : 5. Window frame sill Supplier DEM/ Halo eclipse Profile code P50201 **PVC** Material kg/m³ (stated) Density 2 Overall section size 1200mm · Rebate Reinforcement position All i. S41101 ii. profile code • iii. material Steel iv. density length 1078mm ۷. 6. Hinges Nico manufacturing Supplier : Description 24" restricted friction hinge : Reference 8360 Quantity : 2 Fixing hinge to sash Pan head pierce point i. type 4.8mm x 25mm ii. size : iii. quantity ÷ 4 Fixing hinge to frame Pan head drill point i. type 1 ii. size 4.8 x16mm : iii. quantity : 3 7. Restrictor Nico manufacturing Supplier Restrictor safety catch Description 600 (catch) 6017 (striker) Reference Fixing restrictor to sash i. type Csk pierce point ii. size 4.3 x 25mm 2 iii. quantity : Fixing restrictor to frame type Csk pierce point i. size 4.3 x 25mm ii. 1 iii. quantity 2 2

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Sample 2

1. Win	dow casement (s)		
Overall \$	Size		1200 x 1200mm
Supplier		:	Quantum windows eurocell logic 70mm
Profile c	odes		7008w
Material		:	PVC
Density		:	kg/m ³ (stated)
	ming section sizes		1136 x 1136mm
	ixing method Type size quan	tity :	Welded
Reinford			None
i. pos		:	
ii. prot		:	
iii. mat		:	
iv. den	2	:	kg/m ³ (stated)
v. leng			
	dow casement glass		
Supplier			CET glass processors (holdings) Ltd
Thicknes		:	4-20-4
Overall s			1018 x 1018mm
	dow frame head		
Supplier			Eurocell euro logic
Profile c	ode		7021w
Material			PVC
Density			kg/m ³ (stated)
	section size	:	1200mm
Rebate	and the last of the tasks	:	
	mb to head joints	:	
i. type		:	Welded
ii. size		:	
	ntity	:	
Reinford		_	News
	ition	-	None
ii. prot			
iii. mat			kg/m ³ (stated)
iv. den	-		kg/m (stated)
v. leng	dow frame jamb	•	
Supplier	-		Eurocell euro logic
Profile c			7021w
Material	ode	:	PVC
Density		:	kg/m ³ (stated)
	section size	:	1200mm
Rebate	Section Size	:	12001111
	mb to sill joints	•	
i. type			Welded
ii. matei	ial		Welded
iii. size			
iv. quan	tity		
Reinford		•	None
	ition		
•			
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			Desumant No DC01 Z N- 1 Chart





ii. profile code	
iii. material	:
iv. density	kg/m ³ (stated)
v. length	
5. Window frame sill	•
Supplier	: Eurocell euro logic
Profile code	: 7021w
Material	: PVC
Density	kg/m ³ (stated)
Overall section size	: 1200mm
Rebate	
Reinforcement	None
i. position	:
ii. profile code	:
iii. material	:
iv. density	:
v. length	:
6. Hinges	
Supplier	: Nico manufacturing
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 drill point
ii. size	: 4.8 x16mm
iii. quantity	: 3
7. Restrictor	
Supplier	: Nico manufacturing
Description	: Restrictor safety catch
Reference	: 6000 (catch) 6017 (striker)
Fixing restrictor to sash	
i. type	: Csk pierce point
ii. size	: 4.3mm x 25mm
iii. quantity	: 2
Fixing restrictor to frame	
i. type	Csk pierce point
ii. size	: 4.3mm x 25mm
iii. quantity	: 2

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Sample 3

1. Window casement (s)	
Overall Size	1200 x 1200mm
Supplier	: Dunster house/ selecta Advance 70
Profile codes	1704 sash
Material	: PVC
Density	: kg/m ³ (stated)
Sash framing section sizes	1144mm x 1144mm
Corner fixing method Type size quantity	: Welded
Reinforcement	
i. position	: All
ii. profile code	: 1754
iii. material	: Steel
iv. density	: kg/m ³ (stated)
v. length	: 982 x 982 mm
2. Window casement glass	
Supplier	:
Thickness	: 28mm
Overall size	1022 x 1022mm
3. Window frame head	
Supplier	: Dunster house/ selecta advance 70
Profile code	: 1700
Material	: PVC
Density	: kg/m ³ (stated)
Overal section size	: 1200mm
Rebate	:
Fixing jamb to head joints	: Welded
i. type	:
ii. size	
iii. quantity	
Reinforcement	
i. position	: All
ii. profile code	1750mm
iii. material	: Steel
iv. density	kg/m ³ (stated)
v. length	: 1082mm
4. Window frame jamb	. 1002.000
Supplier	: Dunster house/ selecta advance 70
Profile code	: 1700
Material	: PVC
Density	: kg/m ³ (stated)
Overall section size	: 1200mm
Rebate	: 1200mm
Fixing jamb to sill joints	. 12001111
	: Welded
i. type ii. material	
ii. size	
iv. quantity	
Reinforcement	
i. position	: All
ii. profile code	1750
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iii. material iv. density v. length	: Steel : kg/m ³ (stated) : 1082
5. Window frame sill	
Supplier	: Dunster house/ selecta advance 70
Profile code	: 1700
Material	: PVC
Density	: kg/m ³ (stated)
Overall section size	: 1200mm
Rebate	
Reinforcement	
i. position	: All
ii. profile code	: 1750
iii. material	: Steel
iv. density	:
v. length	: 1082
6. Hinges	
Supplier	: Nico manufacturing
Description	: 24" restricted friction hinge
Reference	: 8360
Quantity	: 2
Fixing hinge to sash	
i. type	: Pan head pierce point
ii. size	: 3.9mm x 19mm
iii. quantity	: 4
Fixing hinge to frame	
iv. type	: Pan head drill point
v. size	: 3.9 x19mm
vi. quantity	: 3
7. Restrictor	
Supplier	: Nico manufacturing
Description	: Restrictor safety catch
Reference	: 6000 (catch) 6017 (striker)
Fixing restrictor to sash	
i. type	: Csk pierce point
ii. size	: 4.3mm x 25mm
iii. quantity	: 2
Fixing restrictor to frame	
i. type	Csk pierce point
ii. size	: 4.3mm x 25mm
iii. quantity	: 2

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Sample 4

1. Window casement (s)

1. Window casement (s)		/
Overall Size		1200 x 1200 mm
Supplier	:	Windowbuild profile 22
Profile codes		22650 sash
Material	:	PVC
Density	:	kg/m ³ (stated)
Sash framing section sizes		1132 mm
Corner fixing method Type size quantity	:	Welded
Reinforcement		None
i. position	:	
ii. profile code	:	
iii. material	:	
iv. density	:	kg/m ³ (stated)
v. length		
2. Window casement glass	•	
Supplier	:	Windowbuild
Thickness	:	4-16-4
Overall size	•	1020 x 1020 mm
3. Window frame head		1020 × 1020 mm
Supplier		Profile 22
Profile code	:	22810 outer frame
	:	PVC
Material	•	
Density		kg/m ³ (stated)
Overall section size	:	1200 mm
Rebate	:	
Fixing jamb to head joints	:	
i. type	:	Welded
ii. size	:	
iii. quantity	:	
Reinforcement		None
i. position	:	
ii. profile code		
iii. material	:	
iv. density	:	kg/m ³ (stated)
v. length	:	
4. Window frame jamb		
Supplier	:	Profile 22
Profile code	:	22810 outer frame
Material	:	PVC
Density	:	kg/m ³ (stated)
Overall section size		1200mm
Rebate	:	
Fixing jamb to sill joints	•	
i. type		Welded
ii. material	:	Welded
ii. size	:	
	:	
iv. quantity	•	None
Reinforcement		None
i. position	:	
ii. profile code		

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We are to del	
iii. material	$\frac{1}{2}$
iv. density	: kg/m ³ (stated)
v. length	:
5. Window frame sill	Drafile 22
Supplier	: Profile 22
Profile code	: 22810 outer frame
Material	: PVC : kg/m ³ (stated)
Density	: 1200mm
Overall section size Rebate	. 1200/11/1
Reinforcement	None
	. INONE
i. position ii. profile code	
ii. material	
iv. density	
v. length 6. Hinges	
	: Nico manufacturing
Supplier Description	: 24" restricted friction hinge
Reference	: 7960
Quantity	: 2
•	· Z
Fixing hinge to sash i. type	: Dan head pierce point
ii. size	 Pan head pierce point 4.8mm x 25mm
iii. quantity	: 4.8000 × 25000
Fixing hinge to frame	. 5
i. type	: Pan head pierce point
ii. size	: 4.2mm x 25mm
iii. quantity	: 4.2000 × 20000
7. Restrictor	. 5
Supplier	: Nico manufacturing
Description	: Restrictor safety catch
Reference	: 6000 (catch) 6013 (striker)
Fixing restrictor to sash	
i. type	: Csk pierce point
ii. size	: 4.3mm x 25mm
iii. quantity	: 2
Fixing restrictor to frame	· Z
i. type	Csk pierce point
ii. size	: 4.3mm x 25mm
iii. quantity	: 2
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Sample 5

1. Window	casement (s)		
Overall Size	. ,		1200 x 1200mm
Supplier		:	Quantum windows Beaufort V1
Profile codes	3		AW 6244-1
Material		:	Aluminium
Density		:	kg/m ³ (stated)
	g section sizes		1142 x 1142mm
	method Type size qua	antity :	XA903 wide chevron 1 per corner
Reinforceme			XA711 14.2mm corner cleat
i. position		:	None
ii. profile c		:	
iii. material		:	ka/m^{3} (stated)
iv. density			kg/m ³ (stated)
v. length	accoment alogo	:	
	casement glass		CET glass processors (boldings) td
Supplier Thickness		:	CET glass processors (holdings) Ltd 4-20-4
Overall size		•	4-20-4 1052 x 1052 mm
3. Window	framo hoad		
Supplier			Beaufort V1
Profile code			Aw605-1
Material		:	Aluminium
Density		:	kg/m ³ (stated)
Overall section	on size	•	1200mm
Rebate			
	to head joints	:	XA904 narrow chevron 2 per corner
5			XA903 wide chevron 1 per corner
			XA430 141mm corner cleat 1 per corner
			XA435 5-1mm corner cleat 1 per corner
i. type		:	
ii. size		:	
iii. quantity		:	
Reinforceme			
i. position		:	None
ii. profile c			
iii. material		:	
iv. density		:	kg/m ³ (stated)
v. length	former to set	:	
	frame jamb		Deputert V/
Supplier		:	Beaufort V1
Profile code		:	AW 605-1
Material		:	Aluminium
Density	on cizo	:	kg/m ³ (stated)
Overall section			1200mm
Rebate	o sill iointe	•	XA004 parrow chevron 2 par corpor
Fixing jamb t			XA904 narrow chevron 2 per corner XA903 wide chevron 1 per corner
			XA430 141mm corner cleat 1 per corner
			XA435 5-1mm corner cleat 1 per corner
i. type		;	
ii. material		:	
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iii. size iv. quantity Reinforcement i. position ii. profile code	: None :
 iii. material iv. density v. length 5. Window frame sill 	kg/m ³ (stated)
Supplier Profile code Material	Beaufort V1 AW 605-1
Density Overall section size Rebate	: kg/m ³ (stated) : 1200mm
Reinforcement i. position ii. profile code iii. material iv. density	None : :
v. length 6. Hinges Supplier Description	: Nico manufacturing 24" restricted friction hinge
Reference Quantity Fixing hinge to sash i. type	: 8360 : 2 : Pan head drill point
ii. size iii. quantity Fixing hinge to frame	4.8mm x 16mm 4
vii. type viii. size ix. quantity 7. Restrictor	 Pan head drill point 4.8mm x 16mm 3
Supplier Description Reference Fixing restrictor to sash	 Nico manufacturing Restrictor safety catch 6000 (catch) 6017 (striker)
i. type ii. size iii. quantity	Csk drill point 3.9 x 25mm 2
Fixing restrictor to frame i. type ii. size iii. quantity	 Csk drill point 3.9mm x 25mm 2

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Sample 6

1. Window casement (s)	
Overall Size	700 x 1300 mm
Supplier	: Quantum windows eurocell euro logic
Profile codes	7005w
Material	: PVC
Density	: kg/m ³ (stated)
Sash framing section sizes	636 x 1236mm
Corner fixing method Type size quantity	y : Welded
Reinforcement	None
i. position	:
ii. profile code	:
iii. material	:
iv. density	: kg/m ³ (stated)
v. length	:
2. Window casement glass	
Supplier	: CET glass processors (holdings) Ltd
Thickness	: 4-20-4
Overall size	578 x 1118mm
3. Window frame head	
Supplier	: Eurocell euro logic
Profile code	: 7021w
Material	: PVC
Density	: kg/m ³ (stated)
Overall section size	: 700mm
Rebate	. 70011111
	Woldod
Fixing jamb to head joints	: Welded
i. type	: :
ii. size	
iii. quantity	
Reinforcement	News
i. position	: None
ii. profile code	
iii. material	
iv. density	: kg/m ³ (stated)
v. length	:
4. Window frame jamb	
Supplier	: Eurocell euro logic
Profile code	: 7021 w
Material	: PVC
Density	: kg/m ³ (stated)
Overall section size	: 1300mm
Rebate	:
Fixing jamb to sill joints	Welded
i. type	:
ii. material	:
iii. size	:
iv. quantity	:
Reinforcement	
i. position	: None
ii. profile code	
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M Garfield

Nico Manufacturing Ltd

Author: Client:





iii. material	:
iv. density	: kg/m ³ (stated)
v. length	
5. Window frame sill	
Supplier	: Eurocell euro logic
Profile code	: 7021/w
Material	: PVC
Density	: kg/m ³ (stated)
Overall section size	: 700mm
Rebate	
Reinforcement	None
i. position	:
ii. profile code	:
iii. material	
iv. density	
v. length	· ·
6. Hinges	
Supplier	: Nico manufacturing
Description	: 16" restricted friction hinge to bottom
Reference	: 16" standard friction hinge to top
Quantity	Restricted 8340 standard 8240
Fixing hinge to sash	1 of each
i. type	: Pan head pierce point
ii. size	: 4.8mm x 25mm
iii. quantity	: 3
Fixing hinge to frame	. 0
i. type	: Pan head pierce point
ii. size	: 4.8mm x 25mm
iii. quantity	: 3
7. Restrictor	. 5
	: Nico manufacturing
Supplier Description	: Restrictor safety catch
Reference	•
	: 6000 (catch) 6017 (striker)
Fixing restrictor to sash	. Oak nienes neint
i. type	Csk pierce point
ii. size	: 4.3mm x 25mm
iii. quantity	: 2
Fixing restrictor to frame	
i. type	Csk pierce point
ii. size	: 4.3mm x 25mm
iii. quantity	: 2

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Sample 7

1. Window casement (s)

1. Window casement (s)	
Overall Size	700 x 1300
Supplier	: DEM windows
Profile codes	Halo eclipse/ P50208 sash
Material	: PVC
Density	: kg/m ³ (stated)
Sash framing section sizes	648 x 1248
Corner fixing method Type size quantit	v : Welded
Reinforcement	
i. position	: All
ii. profile code	: S41139
iii. material	: Steel
iv. density	: kg/m ³ (stated)
v. length	: 481 x 1081mm
2. Window casement glass	. 401 × 100 mm
Supplier	: Glasscraft
Thickness	: 28mm
	521 x 1121 mm
Overall size	521 X 1121 mm
3. Window frame head	
Supplier	: DEM/ Haloeclipse
Profile code	: P50201
Material	: PVC
Density	: kg/m ³ (stated)
Overall section size	: 700mm
Rebate	:
Fixing jamb to head joints	: Welded
i. type	:
ii. size	:
iii. quantity	:
Reinforcement	
i. position	: All
ii. profile code	S41101
iii. material	: Steel
iv. density	: kg/m ³ (stated)
v. length	: 578mm
-	. 5701111
•	· DEM/ Hole colinee
Supplier	: DEM/ Halo eclipse
Profile code	: P50201
Material	: PVC
Density	: kg/m ³ (stated)
Overall section size	: 1300mm
Rebate	:
Fixing jamb to sill joints	
i. type	: Welded
ii. material	:
iii. size	:
iv. quantity	:
Reinforcement	
i. position	: All
ii. profile code	S41139
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iii. material : Steel kg/m³ (stated) iv. density ÷ length 1178mm ٧. ÷ 5. Window frame sill Supplier DEM/ Halo eclipse P50201 Profile code Material PVC : kg/m³ (stated) Density Overall section size 700mm Rebate Reinforcement All i. position S41101 profile code ii. : iii. material Steel iv. density v. length 1178mm 6. Hinges Supplier Nico manufacturing Description 16" restricted friction hinge to bottom 16" standard friction hinge to top Reference Restrictor 8340, standard 8240 Quantity : Fixing hinge to sash 1 of each i. type Pan head pierce point 4.8mm x 25mm ii. size : 3 iii. quantity · Fixing hinge to frame Pan head drill point i. type : ii. size : 4.8mm x 16mm 3 iii. quantity 7. Restrictor Supplier Nico manufacturing • Restrictor safety catch Description Reference 1 6000 (catch) 6017 (striker) Fixing restrictor to sash i. type Csk pierce point : 4.3mm x 25mm ii. size • 2 iii. quantity Fixing restrictor to frame Csk pierce point i. type size 4.3mm x 25mm ii. iii. quantity ÷ 2

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Sample 8

1. Window casement (s)

1. Window casement (s)	
Overall Size	700 x 1300 mm
Supplier	: Windowbuild / Profile 22
Profile codes	22650 sash
Material	: PVC
Density	: kg/m ³ (stated)
Sash framing section sizes	632, 1232mm
Corner fixing method Type size quantity	: Welded
Reinforcement	None
i. position	
ii. profile code	
iii. material	
	: kg/m ³ (stated)
iv. density	. ky/m (stated)
v. length	
2. Window casement glass	
Supplier	: Windowbuild
Thickness	: 4-16-4
Overall size	520 x 1120mm
3. Window frame head	
Supplier	: Profile 22
Profile code	: 22810 outerframe
Material	: PVC
Density	: kg/m ³ (stated)
Overall section size	: 1300
Rebate	
Fixing jamb to head joints	
i. type	: Welded
ii. size	. Weided
iii. quantity	•
Reinforcement	
i. position	:
ii. profile code	
iii. material	:
iv. density	: kg/m ³ (stated)
v. length	:
4. Window frame jamb	
Supplier	: Profile 22
Profile code	: 22810 outerframe
Material	: PVC
Density	: kg/m ³ (stated)
Overall section size	: 1300mm
Rebate	
Fixing jamb to sill joints	•
i. type	: Welded
ii. material	. Welded
	:
iii. size	:
iv. quantity	
Reinforcement	None
i. position	:
ii. profile code	

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		0
iii. material	:	
iv. density	:	kg/m ³ (stated)
v. length	:	č ()
5. Window frame sill		
Supplier	:	Profile 22
Profile code	:	22810 outer frame
Material	÷	PVC
Density		kg/m ³ (stated)
Overall section size	:	700 mm
Rebate	•	
Reinforcement		
i. position		None
ii. profile code	:	None
iii. material	:	
iv. density	:	
v. length	:	
6. Hinges	•	
•		Nice manufacturing
Supplier	:	Nico manufacturing
Description	·	16" restrictor friction hinge to bottom of sash
Deference		16" standard friction hinge to top of sash
Reference	:	Restrictor 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	:	4.2mm x 13mm
iii. quantity	:	3
7. Restrictor		
Supplier	:	Nico manufacturing
Description	:	Restrictor safety catch
Reference	:	6000 (catch) 6013 (striker)
Fixing restrictor to sash		
i. type	:	Csk pierce point
ii. size	:	4.3 x 25mm
iii. quantity	:	2
Fixing restrictor to frame		
i. type	:	Csk pierce point
ii. size	:	4.3 x 25mm
iii. quantity	÷	2
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Sample 9

1.	Window	casement (s)
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1. Window casement (s)	
Overall Size	700 x 1300mm
Supplier	: Dunster house/ selecta advance 70
Profile codes	1704 sash
Material	: PVC
Density	: kg/m ³ (stated)
Sash framing section sizes	644 x 1244mm
Corner fixing method Type size quantity	: Welded
Reinforcement	
i. position	: All
ii. profile code	: 1754
iii. material	: Steel
iv. density	kg/m ³ (stated)
v. length	: 482 x 1082 mm
2. Window casement glass	
Supplier	
Thickness	: 28mm
Overall size	522 x 1122mm
3. Window frame head	
Supplier	: Dunster house/ selecta advance 70
Profile code	: 1700
Material	: PVC
Density	kg/m ³ (stated)
Overall section size	: 700mm
Rebate	. 7001111
Fixing jamb to head joints	Welded
i. type	. Weided
ii. size	
iii. quantity	
Reinforcement	
i. position	: All
ii. profile code	1750
iii. material	: Steel
	kg/m ³ (stated)
	: 582mm
v. length	. 56211111
4. Window frame jamb	: Dunster house/ selecta advance 70
Supplier Profile code	: 1700
Material	: PVC
	kg/m^3 (stated)
Density	
Overall section size	: 1300mm
Rebate	Welded
Fixing jamb to sill joints	. vvelded
i. type	:
ii. material	:
iii. size	:
iv. quantity	
Reinforcement	
i. position	: All
ii. profile code	1750
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iii. material	: Steel
iv. density v. length	: kg/m ³ (stated) : 1182mm
5. Window frame sill	. 110211111
Supplier	: Dunster house/ selecta advance 70
Profile code	: 1700
Material	: PVC
Density	: kg/m ³ (stated)
Overall section size	: 700 mm
Rebate	
Reinforcement	
i. position	: All
ii. profile code	: 1750
iii. material	: Steel
iv. density	:
v. length	: 582mm
6. Hinges	
Supplier	: Nico manufacturing
Description	: 16" restricted friction hinge to bottom
- <i>i</i>	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	: 4.3 x 19mm
iii. quantity	: 3
Fixing hinge to frame	. Dan baad nieree neint
i. type ii. size	 Pan head pierce point 4.3 x 19mm
iii. quantity	· 4.5 x 1911111 : 3
7. Restrictor	. 5
Supplier	: Nico manufacturing
Description	: Restrictor safety catch
Reference	: 6000 (catch) 6017 (striker)
Fixing restrictor to sash	
i. type	Csk pierce point
ii. size	: 4.3 x 25mm
iii. quantity	: 2
Fixing restrictor to frame	_
i. type	Csk pierce point
ii. size	4.3 x 25mm
iii. quantity	: 2

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Sample 10

	•
1. Window casement (s)	
Overall Size	700 x 1300m
Supplier :	Quantum windows Beaufort v1
Profile codes	AW624-1
Material :	Aluminium
Density	kg/m ³ (stated)
Sash framing section sizes	642 x 1242mm
Corner fixing method Type size quantity :	XA903 wide chevron 1 per corner
Comer fixing method Type size quantity	XA711 14.2mm corner cleat 1 per corner
Reinforcement	
i. position :	None
ii. profile code	None
iii. material	
	kg/m ³ (stated)
5	ky/m (stated)
v. length :	
2. Window casement glass	
Supplier :	CET glass processors
Thickness :	4-20-4
Overall size	552 x 1152 mm
3. Window frame head	
Supplier :	Beaufort V1
Profile code :	AW 605-1
Material :	Aluminium
Density :	kg/m ³ (stated)
Overall section size :	700mm
Rebate :	
Fixing jamb to head joints :	XA904 narrow chevron 2 per corner
	XA903 wide chevron 1 per corner
	XA430 14mm corner cleat 1 per corner
	XA435 5.1mm corner cleat 1 per corner
i. type :	
ii. size :	
iii. quantity :	
Reinforcement	None
i. position :	
ii. profile code	
iii. material :	
iv. density	kg/m ³ (stated)
v. length	
4. Window frame jamb	
Supplier :	Beaufort V1
Profile code	AW 605-1
Material :	Aluminium
Density	kg/m ³ (stated)
Overall section size	1300mm
	15001111
Rebate :	
Fixing jamb to sill joints	XA904 narrow chevron 2 per corner
	XA903 wide chevron 1 per corner
	XA430 14mm corner cleat 1 per corner
i type	XA435 5.1mm corner cleat 1 per corner

i. type

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ii. material	:
iii. size	:
iv. quantity	:
Reinforcement	None
i. position	:
ii. profile code	
iii. material	
iv. density	: kg/m ³ (stated)
v. length	· · · ·
5. Window frame sill	
	: Beaufort V1
Supplier	
Profile code	: AW 605-1
Material	: Aluminium
Density	: kg/m ³ (stated)
Overall section size	: 700mm
Rebate	
Reinforcement	None
i. position	:
ii. profile code	:
iii. material	:
iv. density	:
v. length	:
6. Hinges	
Supplier	: Nico Manufacturing
Description	: 16" restricted friction hinge to bottom
Description	16" standard friction hinge to bottom
Reference	: Restricted 8340 standard 8240
Quantity	1 of each
Fixing hinge to sash	
i. type	: Pan head drill point
ii. size	: 4.8 x 16mm
iii. quantity	: 3
Fixing hinge to frame	
i. type	: Pan head drill point
ii. size	4.8 x 16mm
iii. quantity	: 3
7. Restrictor	
Supplier	: Nico manufacturing
Description	: Restrictor safety catch
Reference	: 6000 (catch) 6017 (striker)
Fixing restrictor to sash	
•	Cok drill point
i. type	Csk drill point
ii. size	: 3.9 x 25mm
iii. quantity	: 2
Fixing restrictor to frame	
i. type	Csk drill point
ii. size	: 3.9 x 25mm
iii. quantity	: 2

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PERFORMANCE CRITERIA & TEST RESULTS

Clause	Result	Pass/Fail
4.8 Load-	Restrictor : 8360 (restrictor fitted on both hinges)	
bearing capacity of safety devices	Testing was carried out, 350N was applied for 60 seconds with out damage occurring.	PASS
Sample 1	Restrictor : 6000/6017	
	Testing was carried out, 350N was applied for 60 seconds with out damage occurring.	PASS
4.8 Load-	Restrictor : 8360 (restrictor fitted on both hinges)	
bearing capacity of safety devices	Testing was carried out, 350N was applied for 60 seconds, the hinge bent slightly but the casement was held in position.	PASS
Sample 2	Restrictor : 6000/6017	
	Testing was carried out, 350N was applied for 60 seconds with out damage occurring.	PASS
4.8 Load-	Restrictor : 8360 (restrictor fitted on both hinges)	
bearing capacity of safety devices	Testing was carried out, 350N was applied for 60 seconds with out damage occurring.	PASS
Sample 3	Restrictor : 6000/6017	
	Testing was carried out, 350N was applied for 60 seconds with out damage occurring.	PASS
4.8 Load-	Restrictor : 7960 (restrictor fitted on both hinges)	
bearing capacity of safety devices	Testing was carried out, 350N was applied for 60 seconds with out damage occurring.	PASS
Sample 4	Restrictor : 6000/6013	
	Testing was carried out, 350N was applied for 60 seconds with out damage occurring.	PASS

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EXOVO Warringtonfire

Clause	Result	Pass/Fail
4.8 Load- bearing	Restrictor : 8360 (restrictor fitted on both hinges)	
capacity of safety devices	Testing was carried out, 350N was applied for 60 seconds with out damage occurring.	PASS
Sample 5	Restrictor : 6000/6017	
	Testing was carried out, 350N was applied for 60 seconds with out damage occurring.	PASS
4.8 Load-	Restrictor : 8340 (restrictor fitted on bottom hinge)	
bearing capacity of safety devices	Testing was carried out, 350N was applied for 60 seconds with out damage occurring.	PASS
Sample 6	Restrictor : 6000/6017	
	Testing was carried out, 350N was applied for 60 seconds with out damage occurring.	PASS
4.8 Load-	Restrictor : 8340 (restrictor fitted on bottom hinge)	
bearing capacity of safety devices	Testing was carried out, 350N was applied for 60 seconds with out damage occurring.	PASS
Sample 7	Restrictor : 6000/6017	
	Testing was carried out, 350N was applied for 60 seconds with out damage occurring.	PASS
4.8 Load-	Restrictor : 7940 (restrictor fitted on bottom hinge)	
bearing capacity of safety devices	Testing was carried out, 350N was applied for 60 seconds with out damage occurring.	PASS
Sample 8	Restrictor : 6000/6013	
	Testing was carried out, 350N was applied for 60 seconds with out damage occurring.	PASS

EXOVO Warringtonfire

Clause	Result	Pass/Fail	
4.8 Load- bearing	Restrictor : 8340 (restrictor fitted on bottom hinge)		
capacity of safety devices	Testing was carried out, 350N was applied for 60 seconds with out damage occurring.	PASS	
Sample 9	Restrictor : 6000/6017		
	Testing was carried out, 350N was applied for 60 seconds with out damage occurring.	PASS	
4.8 Load-	Restrictor : 8340 (restrictor fitted on bottom hinge)		
bearing capacity of safety devices	Testing was carried out, 350N was applied for 60 seconds with out damage occurring.	PASS	
Sample 10	Restrictor : 6000/6017		
	Testing was carried out, 350N was applied for 60 seconds with out damage occurring.	PASS	

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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.
Ohaanstiana	

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: ±2% Distances: ±1mm for tape measures ± 0.01mm for dial gauges Times: ±5s

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REVISION HISTORY

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END OF REPORT

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