



Folding Sliding Door Cyclic Testing

following the principles of

BS EN 1191:2012

**Windows and doors resistance to repeated
opening and closing test method**

Client:	Stayfix Ltd
Address:	53 Park Royal Road London NW10 7LQ
Project:	Stayfix Vision Fold BI-Fold Doorset
Project reference:	W14345-1
Issue date:	13/03/2015
Prepared By:	R Bate

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1.0 Summary

The cyclic testing on a three leaf, aluminium bi-folding doorset was commissioned by Kiran Budhia of Stayfix Ltd, 53 Park Royal Road, London, NW10 7LQ and was performed following the principles in BS EN 1191:2012.

This report only relates to the actual sample tested.

2.0 Test Specimen

Type of specimen:	Aluminium Bi-Folding Door
Brand/ range name	Stayfix Vision Fold BI-Fold Doorset
Door frame construction:	
Material / profile:	Aluminium F1101 – Outer Frame
Size (w x h x t) in mm	3000 x 2400 x 71mm
Joints	F1027 Corner fixing. Fixed in with general purpose silicone
Seals	PG014 - Foam Bubble
Thermal insert	Polyamide 20mm
Sash frame construction:	
Material / profile	Aluminium F1104 - Opening In stile; F1103 – Fold Stile
Size (w x h x t) in mm)	1 x 984 x 2306mm; 2 x 967 x 2306mm
Joint	F1004 – 12mm leaf cleat. Joined with general purpose silicone
Thermal insert	32mm Polyamide
Seals	PG014 - Foam Bubble [rebate]; FG001 – Fold gasket Type 1 [fold style]
Other information	F1043 – toe and heal device
Glazing:	
Size (w x h x t) in mm	872mm x 2211mm x 28mm
Unit	4-20-4 - 28mm toughened glass
Kingsbury Windows	Kingsbury Windows
Beads	F1109 Fold Bead
Gasket	WG034T – 3/4mm Wedge gasket
Other information:	N/A
Hardware:	Stayfix Ltd own hardware Outer hinge – F1010; Fold hinge – F1007 Top Roller/Bottom Wheel – F1023 Top Roller/Bottom Wheel – F1023 Fold stile Foam 23 x 55mm – FO11 Lever/Lever handle – 641 Cylinder 45/45- 45/45 3 Point door Lock – 621

3.0 Test Details

The specimen was received on: 20/01/2015

Test Date: 20/01/2015 to 2/02/2015

Test performed by: Richard Bate

The specimen was kept in the laboratory from the date it was received until the date it was tested and has thus been conditioned at a temperature of between 15 to 30°C and a relative humidity of between 25 to 75%.

Environmental test conditions: Laboratory temperature 17°C, relative humidity 41%

The test method followed the principles of Annex D of BS EN 1191:2012 however there were some deviations from the test method. One of which is that the doorset was fully opened and closed in one complete cycle and as such falls outside of the standard, which requires that the cycles of the master door and the folding sliding sashes shall be done separately. The Build Check folding sliding door scheme has chosen to cycle this way as it is deemed to be more onerous.

The dead loads applied to the operating points were no more than 0.6kg per leaf.

The weight of the glass unit in the individual door leaf is 45kg.

4.0 Results

Cycles completed 10000


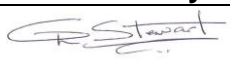
Operating forces measured before and after the test

	Before Test	After Test
Master leaf to open	10N	10N
Master leaf to close	10N	10N
Sliding to open	55N	50N
Sliding to close	55N	59N
Handle de-latch	<5Nm	<5Nm

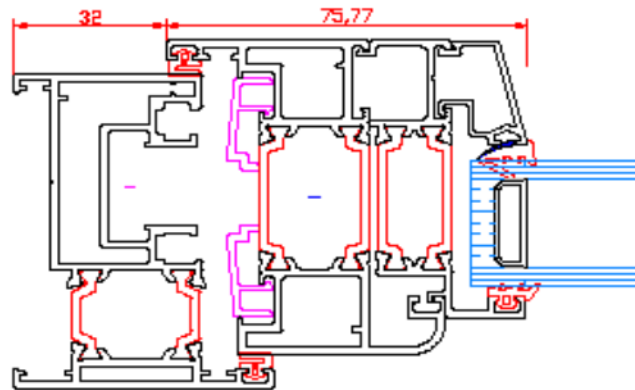
Every 2,500 cycles the door was stopped and operating forces were checked. No adjustments or lubrication was undertaken. No wear or failure was observed.

During the cycling test the fastening system of the master door was operated.

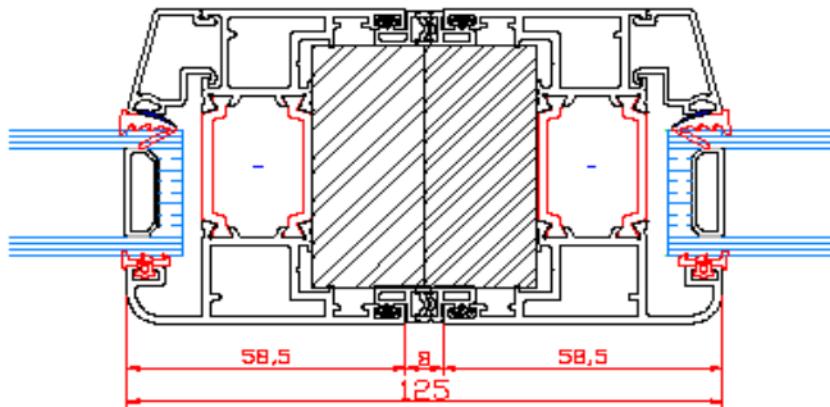
5.0 Authorisation

	Prepared by:
Signature:	
Name:	Richard Bate Technical Director
	Authorised by:
Signature:	
Name:	Test Engineer

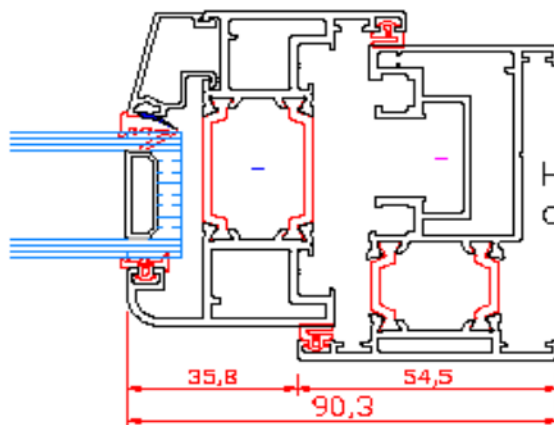
Appendix Test Specimen Drawings



Lock section configuration



Fold section configuration



Hinge side configuration