

Certificate of Testing



Certificate Number: 2007/28

Date: August 2007

System: Rieder (fibre C) rainscreen panels assembled to Eurofox Engineering Limited brackets and support profiles.

Supplier: Cladding Solutions Ltd
Unit 10 Blenheim Court
Brownfields
Welwyn Garden City
Herts
AL7 1AD

- Tests performance:**
- Watertightness - dynamic ✓
 - Wind resistance - serviceability ✓
 - Wind resistance - safety ✓
 - Impact ✓

In accordance with 'Standard for Systemised Building Envelopes' CWCT, 2006

Signed:  Test Witness

Signed:  Director

Description of components tested

Rainscreen system:	(Fibre C) rainscreen panels with EEL support system
Panel material:	(Fibre C) glass fibre reinforced concrete
Panel size:	2400 mm x 1200 mm x 13 mm 2400 mm x 1200 mm x 8 mm
Horizontal Joint:	Open with 8 mm gap
Vertical Joint:	Open with 8 mm gap
Support rail:	Vertical: Extruded aluminium profile Horizontal: Extruded aluminium profile
Support rail span:	Vertical: 900 mm Horizontal: 600 mm
Fixings:	<p>Panels fixed to horizontal rails by hanger clips fixed to back of panels with undercut anchors</p> <p>Horizontal rails screwed to vertical rails with stainless steel screws</p> <p>Vertical rail fixed to backing wall by brackets</p> <p>Alternative fixing method, panels bonded to vertical rails using Sika Tack system</p>
Drainage and ventilation:	Drained and ventilated rainscreen cavity
Backing wall:	Framing: steel studs Sheeting on cavity face: plywood

Summary of results

Air permeability:	N/A	The test was carried out to assess the performance of the rainscreen. Air permeability is a function of the backing wall
Watertightness - static:	N/A	The static test is only appropriate for face sealed systems
Watertightness - dynamic:	PASS	Note: Some water was blown through the open joints wetting the back wall. Use of a breather membrane to provide a secondary defence against water penetration is considered necessary for this system
Wind resistance - backing wall:	N/A	
Wind resistance - rainscreen:	PASS	
Serviceability test pressure:	2000 Pa 2400 Pa	Fixing with undercut anchors Fixing with Sika Tack
Safety test pressure:	3000 Pa 3600 Pa	Fixing with undercut anchors Fixing with Sika Tack
	Note:	The safety wind load test on the system is carried out at 1.5 times design wind load. Higher safety factors are recommended for undercut anchors and bonded joints and these should be assessed separately by tests on laboratory samples
Impact test:	BS 8200: 1985 Appendix G on 8 mm and 13 mm panels fixed with SIKA Tack	
Soft body test:		
Safety:	PASS	
Impact energy:	500 Nm	
Serviceability:	PASS	
Impact energy:	120 Nm	
Hard body test:		
Safety:	PASS	
Impact energy:	10 Nm	
Serviceability:	PASS	
Impact energy:	10 Nm	

Testing laboratory

Taylor Woodrow Technology
Stanbridge Road
Leighton Buzzard
Bedfordshire LU7 4QH

Registration No: UKAS No 0057

Independent testing authority: Taylor Woodrow Technology
Stanbridge Road
Leighton Buzzard
Bedfordshire LU7 4QH

Witness: Alan Keiller
Centre for Window and Cladding Technology
University of Bath
Claverton Down
Bath BA2 7AY

Date of test: 14 September 2006 and 13th March 2007

Wind resistance - serviceability test

Fixing method: Mechanical undercut anchors

Result: PASS
Pressure: 2000 Pa

Fixing method: SIKA Tack panel adhesive

Result: PASS
Pressure: 2400 Pa

Deflections

Member	Span	Measured Deflection	
		Pos	Neg
	(mm)		
Rainscreen panel (8 mm panel with SIKA Tack)	600	5.9	-6.2
Rainscreen panel (13 mm panel with SIKA Tack)	600	6.6	-6.6
Rainscreen panel (13 mm panel mechanical fixing)	600	2.8	-5.9

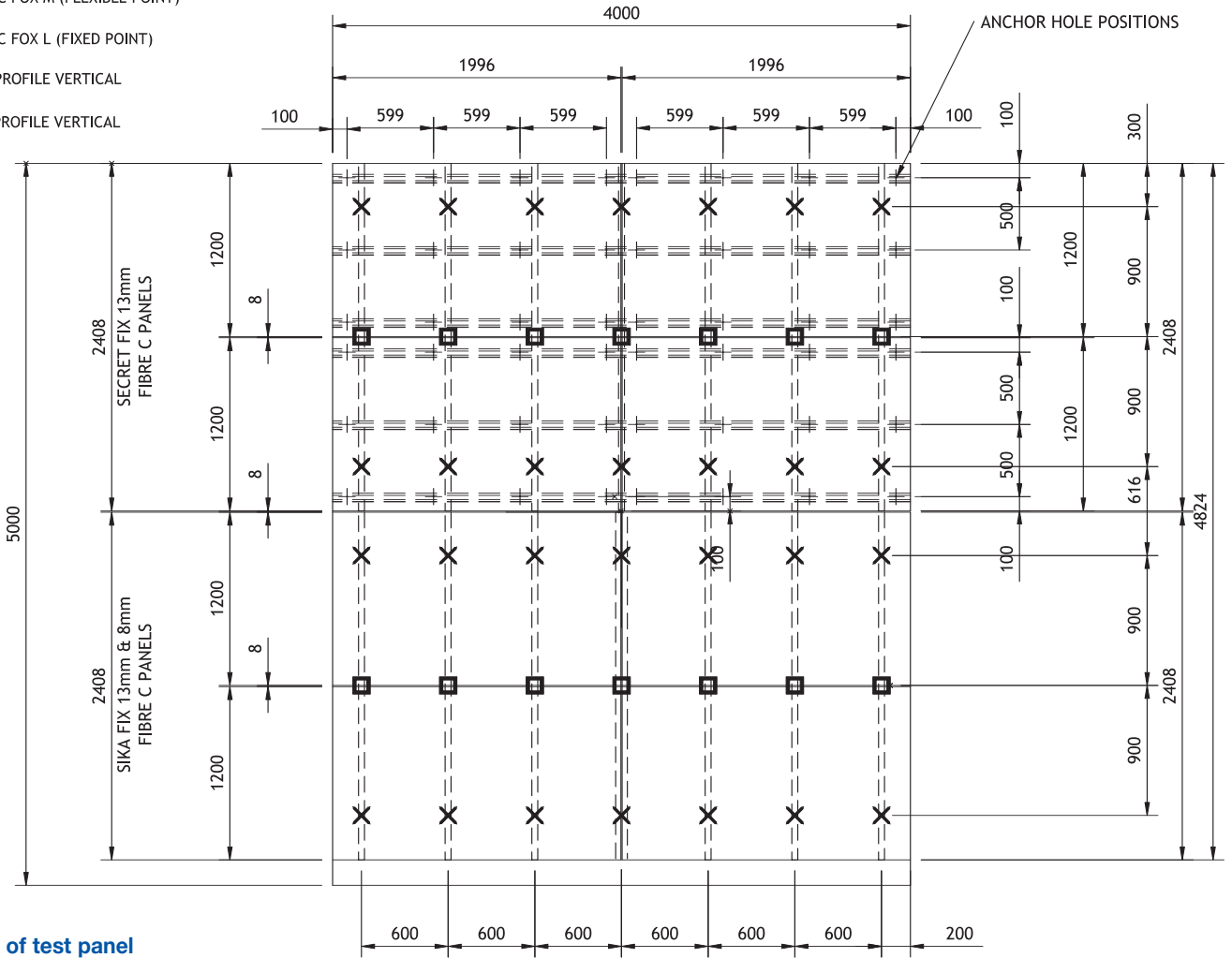
Measured deflections include deflection of panel, deflection of support rails and movement of back wall. Deflection of panel alone will be less than values measured.

CWCT Standard limits deflection of rainscreen panels to span/90. For a span of 600 mm this gives a limit of 6.7 mm.

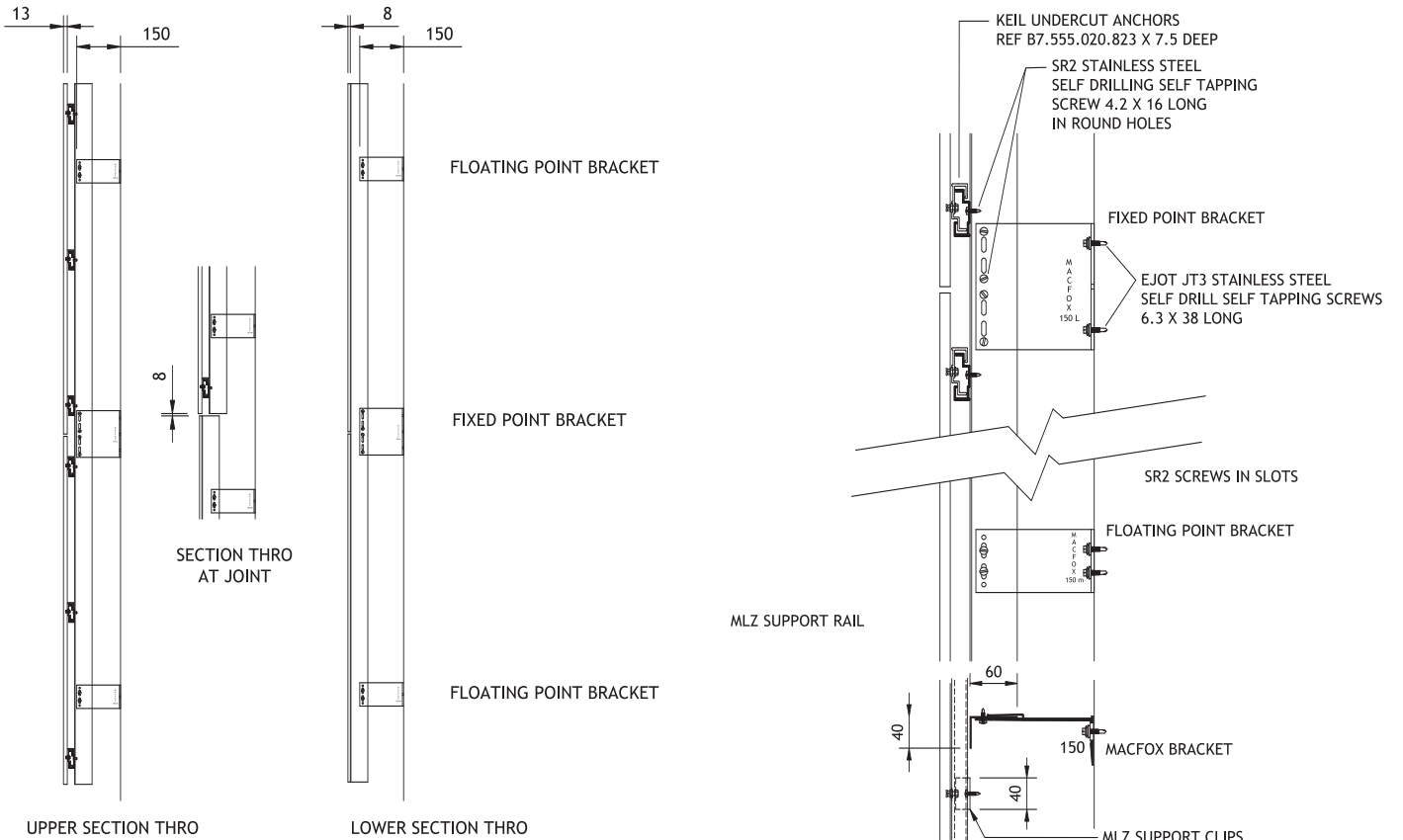
Span of panels has been taken as distance between vertical rails.

LEGEND:

- ✕ MAC FOX M (FLEXIBLE POINT)
- ◻ MAC FOX L (FIXED POINT)
- T-PROFILE VERTICAL
- L-PROFILE VERTICAL



Elevation of test panel



Section through test panel

Support rail and bracket details

Manufacturer: Cladding Solutions Ltd
Unit 10 Blenheim Court
Brownfields
Welwyn Garden City
Herts
AL7 1AD

Installer: Cladding Solutions Ltd
Unit 10 Blenheim Court
Brownfields
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