



NATIONAL TEST REPORT
(BS 6180 : 2011)

EASY GLASS[®] SLIM
FASCIA MOUNT
MOD.6905

TEST REPORT

Ceram Reference: 122969 (QT21288/2/SL)/Ref. 2.0B

Project Title: Testing of Q-railing Glass Balustrade System to BS 6180: 2011 - Slim Fascia Mount

Client: Q-railing Europe GmbH&Co.KG

For The Attention of: Mr Frank Verhey

Author(s): Mr Dave Dix

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Work Location: Ceram UK

This report supersedes the report issued on 18.07.12.



Miss Lisa Cobden
Consultancy Team
Reviewer



Mr Dave Dix
Consultancy Team
Project Manager

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18.07.12

1 INTRODUCTION

Ceram were commissioned by the client, Q-railing Europe GmbH, to carry out load testing in accordance with BS 6180 Barriers in and about buildings, to allow the channels to be classified for use in accordance with BS 6180:2011 Barriers in and about buildings – Code of Practice.

The testing was carried out at Q-railing's test facilities at Marie-Curie-Straße, 8-14 46446, Emmerich am Rhein, Germany.

This report summarises the test results obtained during the test programme and does not provide interpretation of those results.

2 TEST SAMPLES

The aluminium channel tested was designated as System 2 – Slim Fascia Mount (16690500018). The system is shown in Figure 1.

The channel was installed by Q-Railing personnel.

3 TEST PROGRAMME

A horizontal line load was carried out on the aluminium channel with the following glass types installed:

- 15 mm Monolithic Toughened (ESG) – 15 ESG – size (w x h): 1.1 m x 1.2 m
- 19 mm Monolithic Toughened (ESG) – 19 ESG – size (w x h): 1.0 m x 1.2 m
- 21.52 mm Laminated Toughened (VSG) – 21.52 VSG (10 ESG-1.52PVB-10 ESG) – size (w x h): 1.1 m x 1.2 m.

4 TEST METHOD

The channel was bolted down to a concrete block, nominally 0.5 m x 0.5 m x 3.5 m, which was fixed to the floor of the test facility. The channel was bolted to the block at 250 mm centres by the client using the appropriate fixings (see Figure 2).

The appropriate thickness glass panel was fitted into the channel using the 'Safety Wedge' fixing clips at nominally 250 mm centres such that the plastic clip was to the inside face of the glass (see Figures 2 and 3).

A horizontal imposed line load was applied to the glass at a height of 1.1 m above the datum level of the floor and the deflection measured at the top central point of the panel 1.1 m above the datum level of the floor. The load was applied via a hydraulic ram and the deflection measured using a digital electronic displacement transducer (see Figure 3).

5 RESULTS

The test was carried out in accordance with the guidance given in BS 6180 Barriers in and about buildings – Code of Practice. The standard states that the maximum allowable deflection for a free standing glass protective barrier panel is 25 mm.

Table 2 of BS 6180 Barriers in and about buildings – Code of Practice categorises parapets, barriers and balustrades for areas of use depending on the loads they have achieved under testing.

The loads achieved by the Q-Railing glazing system tested under horizontal imposed line load to the maximum deflection of 25 mm are given in Table 1.

All figures quoted in Table 1 contain no safety factors and are direct loads as achieved by the system under test conditions.

Table 2 summarises the suitability of the tested systems in accordance with Table 2 of BS 6180:2011.

NOTE: The results given in this report apply only to the samples that have been tested.

END OF REPORT

Table 1 - Summary of Performance of Q-railing Glass Balustrade System Tested under Horizontal Imposed Line Load

Base Rail	Glass	Imposed Line Load at 25 mm Deflection (kN/m)	Working Line Load for System (kN/m)	Deflection at Working Line Load for System (mm)
System 2 – Slim Fascia Mount (16690500018)	19 mm Monolithic Toughened 1.0 m x 1.2 m	0.86	0.74	20.9
	15 mm Monolithic Toughened 1.1 m x 1.2 m	0.78	0.74	23.1
	21.52 mm Laminated Toughened 1.1 m x 1.2 m	0.77	0.74	23.3

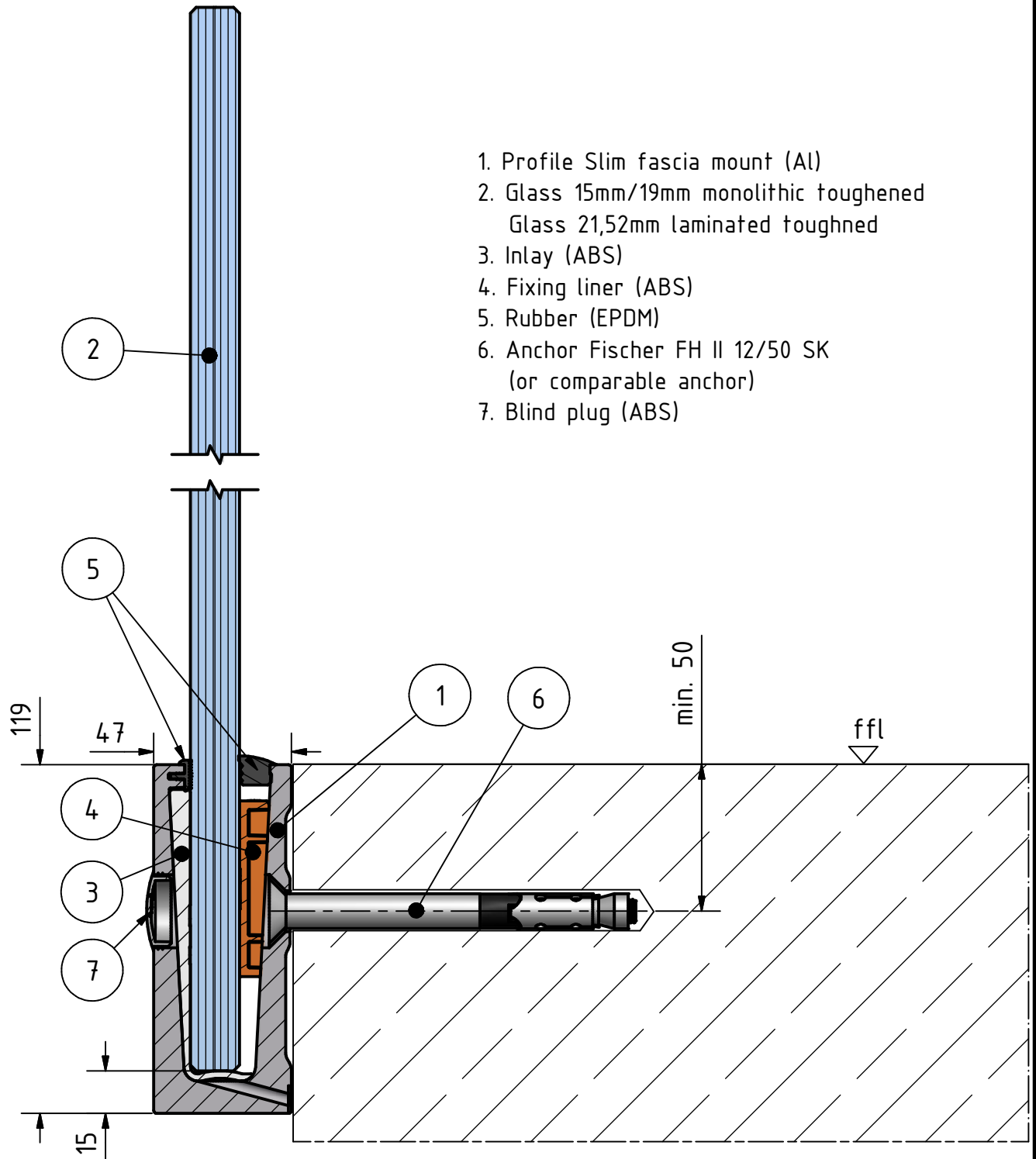
Table 2 - Summary of Suitability of Q-railing Glass Balustrade Systems in Accordance with Table 2 of BS 6180:2011

Type of Occupancy for Part of the Building or Structure	Examples of Specific Use	Horizontal Uniformly Distributed Line Load (kN/m)	System 2		
			19 mm Monolithic Toughened	15 mm Monolithic Toughened	21.52 mm Laminated Toughened
Domestic and residential activities	(i) all areas within or serving exclusively one single family dwelling including stairs, landings, etc but excluding external balconies and edges of roofs	0.36	✓	✓	✓
	(ii) other residential, i.e. houses of multiple occupancy and balconies, including Juliette balconies and edges of roofs in single family dwellings	0.74	✓	✓	✓
Offices and work areas not included elsewhere, including storage areas	(iii) light access stairs and gangways not more than 600 mm wide	0.22	✓	✓	✓
	(iv) light pedestrian traffic routes in industrial and storage buildings except designated escape routes	0.36	✓	✓	✓
	(v) areas not susceptible to overcrowding in office and institutional buildings, also industrial and storage buildings except as given above	0.74	✓	✓	✓
Areas where people might congregate	(vi) areas having fixed seating within 530 mm of the barrier, balustrade or parapet	1.5	X	X	X
Areas with tables or fixed	(vii) restaurants and bars	1.5	X	X	X

Type of Occupancy for Part of the Building or Structure	Examples of Specific Use	Horizontal Uniformly Distributed Line Load (kN/m)	System 2		
			19 mm Monolithic Toughened	15 mm Monolithic Toughened	21.52 mm Laminated Toughened
seating					
Areas without obstacles for moving people and not susceptible to overcrowding	(viii) stairs, landings corridors ramps	0.74	✓	✓	✓
	(ix) external balconies including Juliette balconies and edges of roofs; footways and pavements within building cartilage adjacent to basement/sunken areas	0.74	✓	✓	✓
Areas susceptible to overcrowding	(x) footways or pavements less than 3 m wide adjacent to sunken areas	1.5	X	X	X
	(xi) theatres, cinemas, discotheques, bars, auditoria, shopping malls, assembly areas, studios; footways or pavements greater than 3 m wide adjacent to sunken areas	3.0	X	X	X
	(xii) grandstands and stadia	(Note 1)	-	-	-
Retail areas	(xiii) all retail areas including public areas of banks/building societies or betting shops	1.5	X	X	X
Vehicular	(xiv) pedestrian areas in car parks, including stairs, landings, ramps, edges of internal floors, footways, edges of roofs	1.5 (Note 2)	X	X	X
	(xv) horizontal loads imposed by vehicles	(Note 2)	-	-	-

Note 1 – See requirements of the appropriate certifying authority.

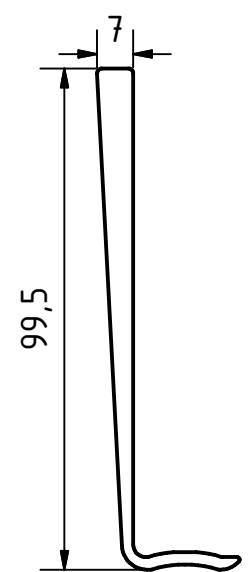
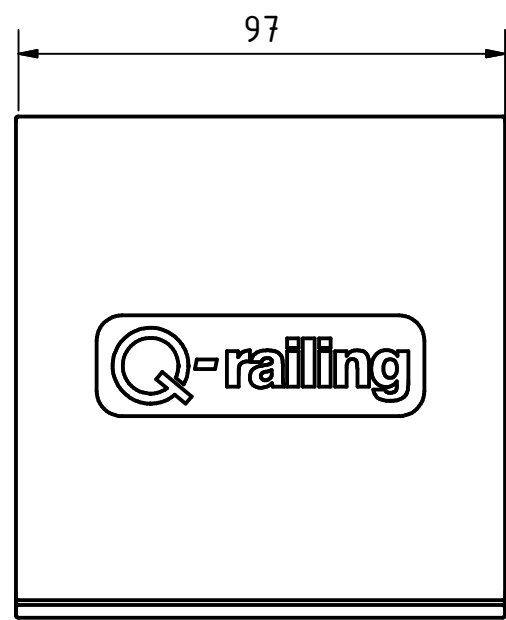
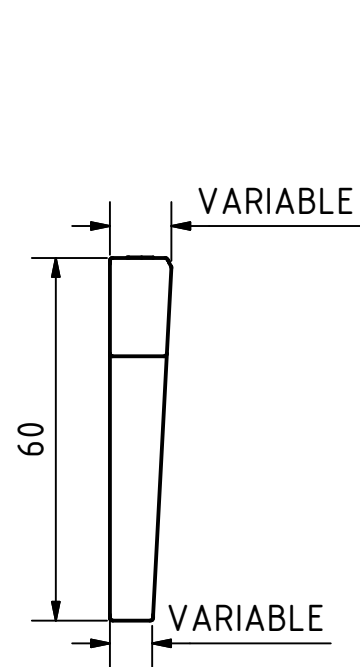
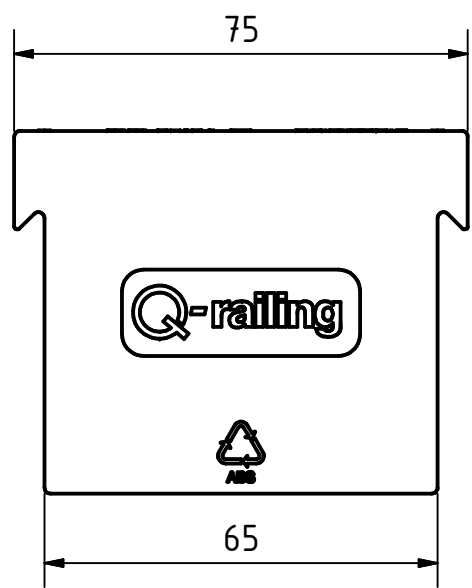
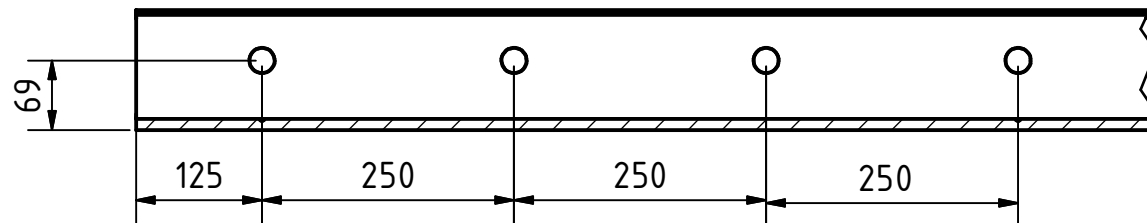
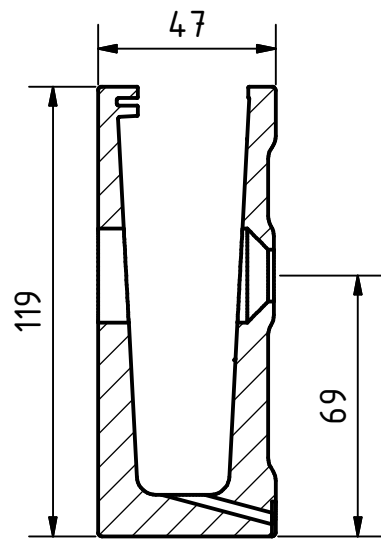
Note 2 – Clause 8.1.1 of BS 6180:2011 states that “glass should not be used for vehicle protection barriers”.




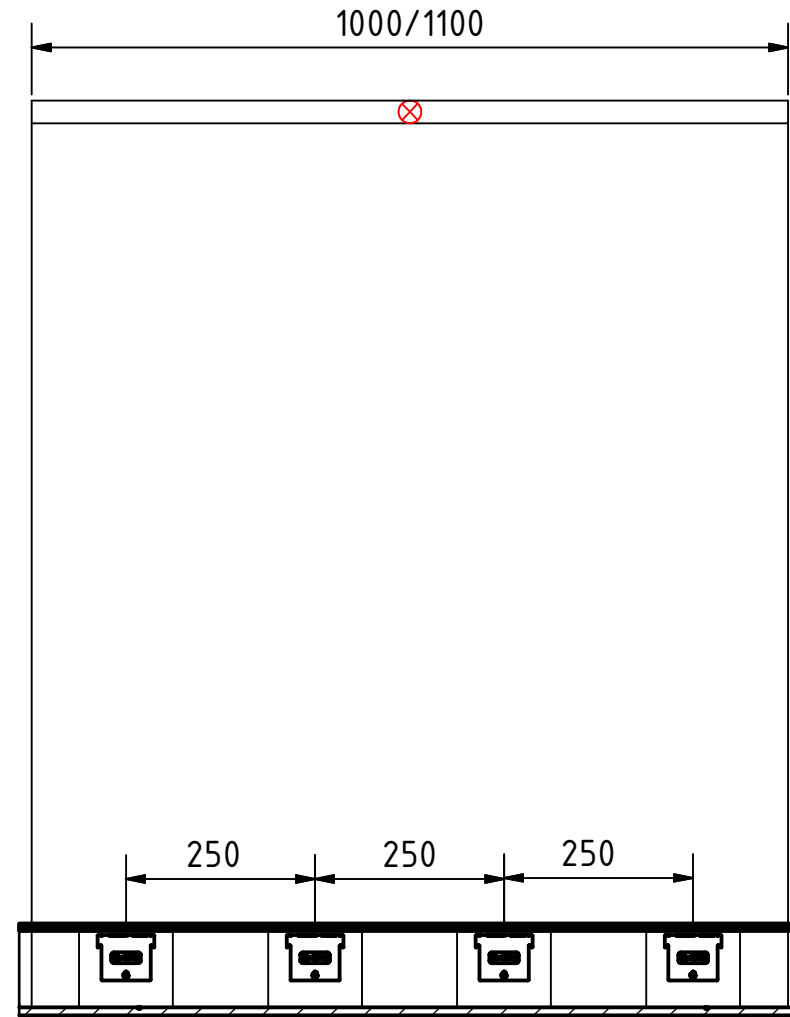
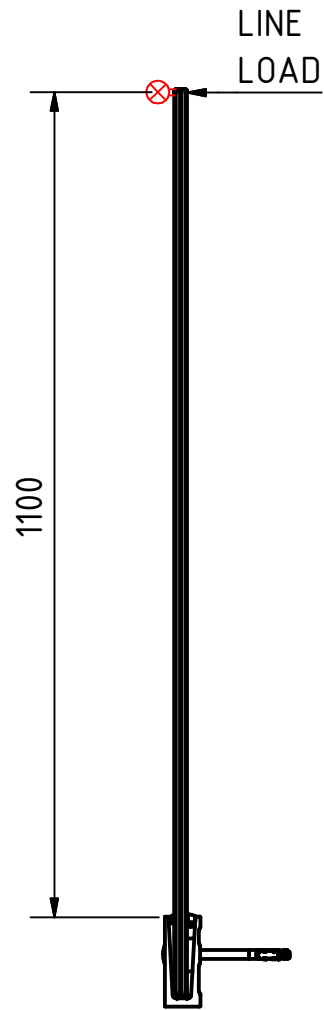
1. Profile Slim fascia mount (Al)
2. Glass 15mm/19mm monolithic toughened
Glass 21,52mm laminated toughened
3. Inlay (ABS)
4. Fixing liner (ABS)
5. Rubber (EPDM)
6. Anchor Fischer FH II 12/50 SK
(or comparable anchor)
7. Blind plug (ABS)

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		Date: 10.07.2012	
Project: fascia mount	Detail: Figure 1	Edited:	
Scale: -	Your choice in railing systems	Date:	





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Project: fascia mount		Detail: Figure 3	Date: 10.07.2012	
Scale: -		Your choice in railing systems		



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