

**EASY GLASS[®] Slim,
EASY GLASS[®] Pro
EASY GLASS[®] Smart
According to AS/NZS 1170.1**

Testing conducted by/at:

Q-railing Europe GmbH & Co.KG

Marie Curie Strasse 8-14

46446 Emmerich am Rhein

Germany

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1. Introduction

This report describes the tests conducted at the test site of Q-railing Europe GmbH & Co.KG on Easy Glass® Slim, Pro & Smart from Q-railing's catalogue, assembled as shown in this report.

The tests were done according to the Australian/New Zealand standards:

1. AS/NZS 1170.0: 2002 General principles
2. AS/NZS 1170.1: 2002 Structural design actions Permanent, imposed and other actions.
3. NZS 4223.3:1999 Code of practice for glazing in buildings Part 3: Human impact safety requirements.

2. Test arrangement

Several base shoe barriers were mounted on a steel test rig with sufficient strength to withstand the loads applied to it.

For each barrier we tested the horizontal line load since the concentrated load of 0.6 kN was not significant.

A horizontal line load is applied to the height of 1000 mm for the residential buildings, which represents the handrail height.

The load is generated by hydraulic or pneumatic cylinders and is measured with a load cell.

Testing was performed on different glass thicknesses, starting by 14.12 mm glass, If this is deemed to pass, it can be said that all thicknesses greater than this will also pass.

Also, we have tested the fascia type of the base shoes with the higher glass than the top mounting position. If this is deemed to pass, it can be said that the top profile with the shorter glass will also pass.

The point of impact by the dynamic load test is in the center of the glass at 250 mm below the handrail height.

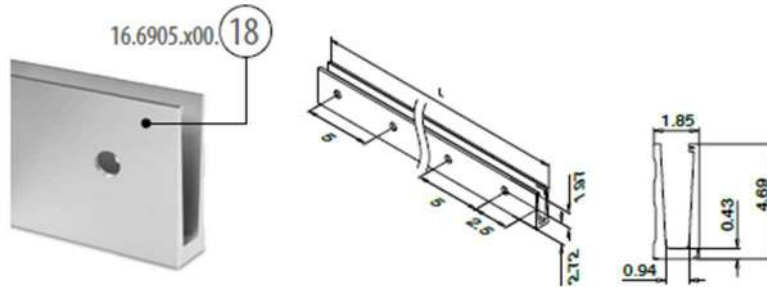
Impact test was run with the EN12600 impactor (weight; 50 kg)

3. Test conditions

Date of testing: 22/10/2018

Air temperature: 22° C

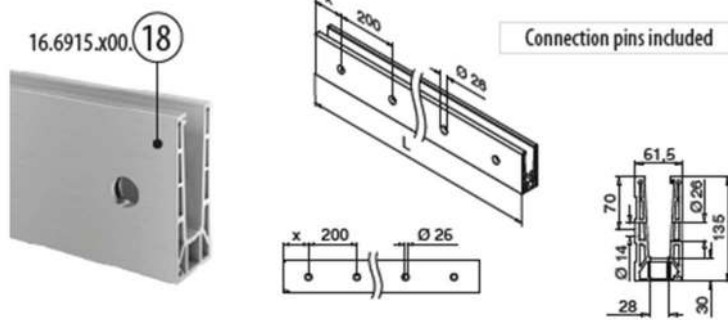
4. Materials



Base shoe:

E.G. Slim Fascia

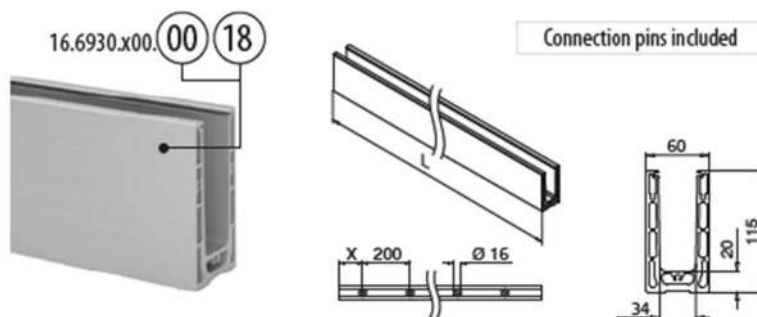
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Base shoe;

E.G. Pro fascia

16.6915.500.18



Base shoe;

E.G. Smart Top

16.6930.500.18

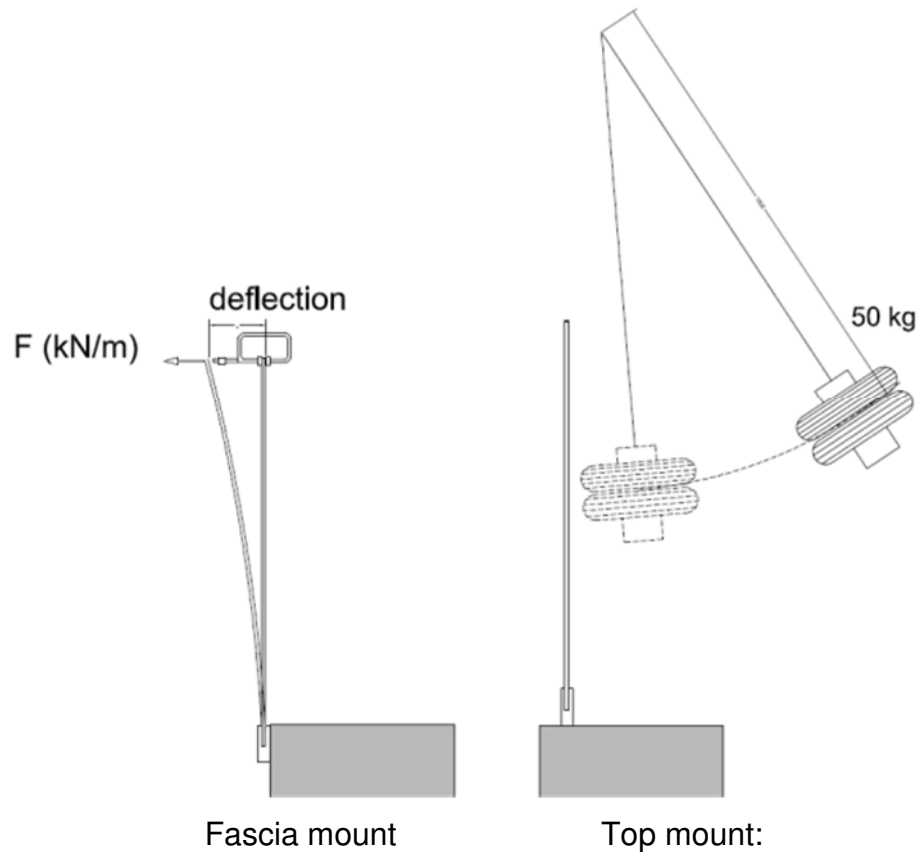
Glass description:

No	Laminate construction	Tot. thick. mm.
1	6 mm toughened glass 0.76 mm evguard film / 0.6 mm evguard® MPE / 0.76 mm evguard film 6 mm toughened glass	14.12
2	8 mm toughened glass 0.38 mm evguard film / 0.6 mm evguard® MPE / 0.38 mm evguard film 8 mm toughened glass	17.36
3	10 mm toughened glass 0.76 mm evguard film/ 0.6 mm evguard® MPE / 0.76 mm evguard film 10 mm toughened glass	22.12

For glass dimensions; see results table.

5. Arrangement of test assembly

Assembly: (general drawing)



6. Test results

System type	Glass dimension mm.	Load Height f.f.f (mm)	Load (kN/m)	Deflection Max.30 mm	Impact fall height	result
Slim fascia	1000x1200x14.12	1000	0.35	17.0	-	-
Slim fascia	1000x1200x17.36	1000	0.75	24.1	700	Ok
Pro fascia fixed	1000x1200x17.36	1000	0.75	17.2	700 900	Ok Ok*
Pro fascia Adj.	1000x1200x17.36	1000	0.75	27.2	700 900	Ok Ok*
Pro fascia fixed	1000x1200x22.12	1000	1.50	25.7	1200	Ok
Smart top	1000x1200x22.12	1200**	-	-	1200	Ok

* One pane was broken

** for pool fencing

7. Comments

Line load test:

Loading was applied to the glass on a handrail height of 1.00m from finished floor level and the deflection was measured at the same height.

- Further Comments

Impact test:

The impact test with an impactor having the mass of 50 kg was executed on the glass:

- with the EN-12600 body:
at the horizontal middle of the glass, 250 mm below the handrail at a fall height of 700/900/1200 mm

8. General overview line load test

