

GLASS ADAPTER Model 747 Barrier testing

Testing conducted by/at:

Q-railing Europe GmbH & Co.KG

Marie Curie Strasse 8-14

46443 Emmerich am Rhein

Germany

1. Introduction

This report describes tests conducted at the test site of Q-railing Europe GmbH & Co.KG on Easy Glass® Evolution from Q-railing's catalogue, assembled with various glass thickness and dimensions as shown.

2. Test arrangement

Various barrier specimens were mounted on to a rigid concrete structure with a test rig from steel with sufficient strength to withstand loads applied to it.

For each test, load was applied to the glass in a hand railing height using a hydraulic ram.

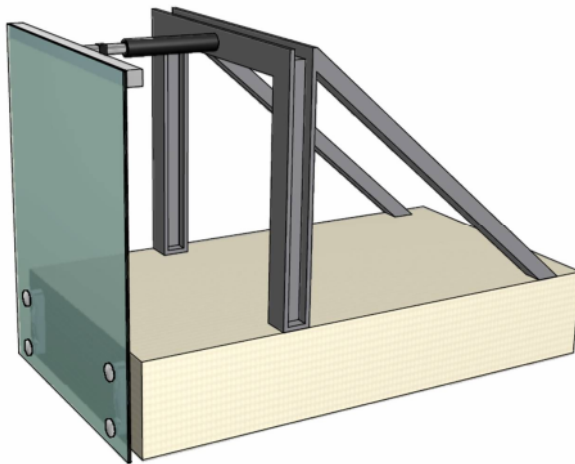
Load was measured with a load cell.

A digital caliper was used to measure the deflection of the barrier from its neutral position.

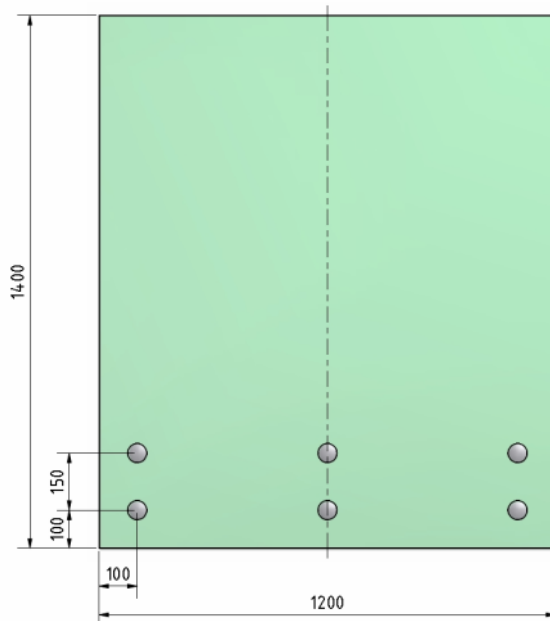
3. Materials

1. Glass adapter. Stainless steel 304 glass adapter model 747. Article number 13.0747.000.12, 6 pieces per glass.
2. Anchoring. Chemical fixing M10 to secure model 747 to the concrete.
3. Glass.
 - a. 6mm-0,76PVB-6mm laminated with toughened, 1,2m wide by 1,4m high.
 - b. 8mm-1,52PVB-8mm laminated with toughened, 1,2m wide by 1,4m high.

4. Arrangement of test assembly



5. Drawing of the glass



6. Test results

The results from the tests are shown in table 1.

F (kN/m)	Deflection (mm) (Glass: 6-0,76PVB-6 1,2m wide x 1,4m high)	Deflection (mm) (Glass: 8-1,52PVB-8 1,2m wide x 1,4m high)
0,36	16,58	8,14
<i>Residual deflection</i>	1,25	1,46
0,5	27,49	14,01
<i>Residual deflection</i>	2,02	1,62
0,74	41,54	20,58
<i>Residual deflection</i>	3,27	2,95
1,0	57,96	27,62
<i>Residual deflection</i>	5,81	5,33
1,3	Glass breakage at 1,07 kN/m	37,42
<i>Residual deflection</i>		7,9
1,5		47,13
<i>Residual deflection</i>		9,42
2,0		Glass breakage at 1,96 kN/m

Table 1. Load deflection results from tests.

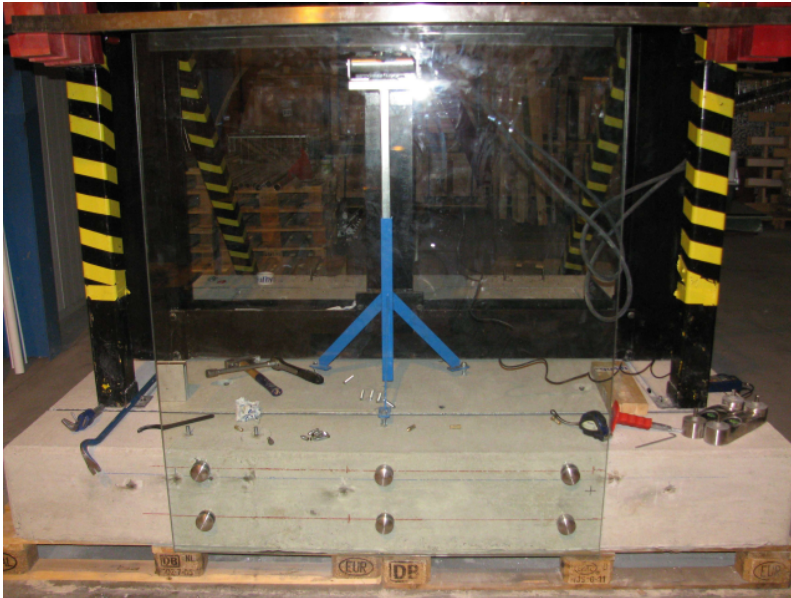
Comments.

The loading was applied to the top of the glass at a height of ~1,1m above finished floor level.

The breakage of the glass occurs at 1,07kN/m and 1,96 kN/m as shown.

The glass adapter model 747 themselves were undamaged.

7. Photographs



General overview of the complete system