

# EASY GLASS® EVOLUTION

## Model 760

### Barrier testing

Testing conducted by/at:

Q-railing Europe GmbH & Co.KG

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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.

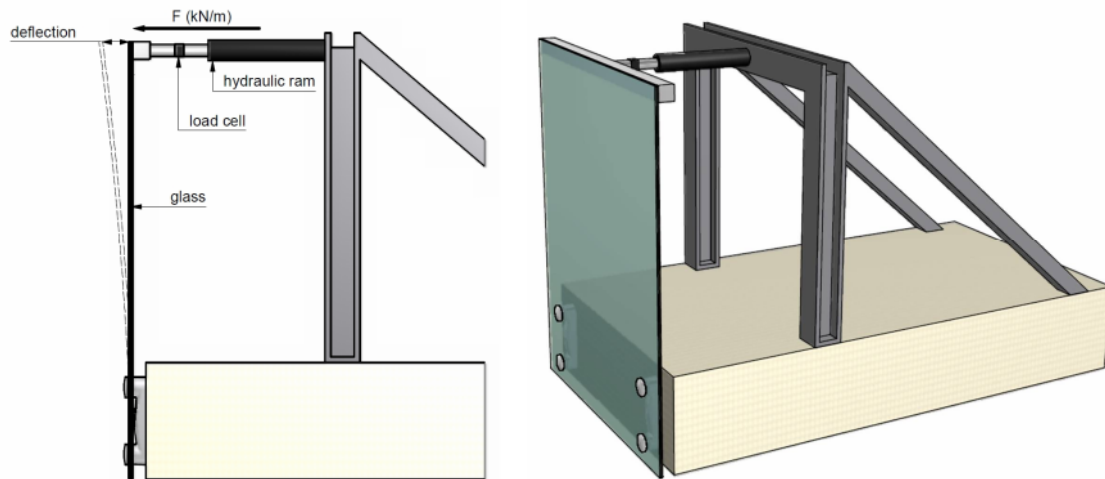
Load was measured with a load cell.

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

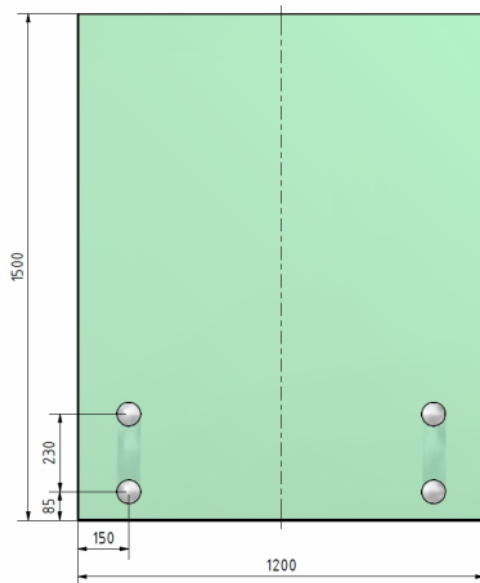
## 3. Materials

1. Glass adapter. Stainless steel 304 glass adapter model 760. Article number 13.0760.000.12.
2. Anchoring. Chemical fixing M12x117 to secure model 760 to the concrete.
3. Glass.
  - a. 6mm-0,76PVB-6mm laminated with toughened, 1,2m wide by 1,5m high.
  - b. 8mm-1,52PVB-8mm laminated with toughened, 1,2m wide by 1,5m high.
  - c. 19mm toughened 1,2m wide by 1,5m high.
  - d. 12mm-1,52PVB-12mm laminated with toughened, 1,2m wide by 1,5m 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 1,5m high)	Deflection (mm) (Glass: 8-1,52PVB-8 1,2m wide x 1,5m high)	Deflection(mm) (Glass: 19mm 1,2m wide x 1,5m high)	Deflection(mm) (Glass: 12-1,52PVB- 12mm 1,2m wide x 1,5m high)
0,36	22,4	9,91	7,0	4,7
0,5	34,15	14,49	9,68	6,6
0,74	50,54	23,18	14,24	9,6
1,0	67,7	30,49	19,74	13,73
1,3		40,27	26,34	18,05
1,5		47,75	29,92	22,27
3,0				39,84

Table 1. Load deflection results from tests.

## Comments.

The loading was applied to the top of the glass at a height of ~1,2m above finished floor level.

The breakage of the glass occurs at **1,3kN/m** (6-0,76PVB-6), **2,0kN/m** (8-1,52PVB-8), **3,3kN/m** (19) and **4,02kN/m**(12-1,52PVB-12) as shown.

The glass adapter model 760 themselves were undamaged.

## 7. Photographs



*General overview of the complete system*



*Line load testing*