



ALLGEMEINES BAUAUFSICHTLICHES  
PRÜFZEUGNIS  
(Absturzsichernde Kategorie: B)

**EASY GLASS® UP**  
MOD.6924

---

# Labor für Stahl- und Leichtmetallbau GmbH

Management: Prof. Dr. - Ing. Ö. Bucak  
at University of Munich  
Faculty 02 Structural engineering / Steel construction



Karlstraße 6, 80333 Munich  
Tel.: 0049/ (0)89/ 1265- 2611; FAX 0049/ (0)89/ 1265- 2699; email: info@laborsl.de

Bay 27

---

## General building-authority test certificate

**Test certificate number:** P-2017-3011

**Object:** linearly mounted compound safety glazing

**System:** EASY GLASS UP

**Intended purpose:** Barrier according to DIN 18008-4  
Additional requirements for barrier glazing  
Building Regulations List A Part 2 - issue 2015/2  
Design according to no. 2.12

**Barrier category:** B

**Applicant:** Q-railing Europe GmbH & Co. KG  
Marie-Curie-Straße 8 - 14  
46446 Emmerich am Rhein

**Date of issue:** 01.02.2017

**Valid until:** 31.01.2022

This general building-authority certificate conforms that the object named above can be used in accordance with the State Building Code.

The general building-authority test certificate consists of 9 pages and 1 appendix.



I.	General regulations .....	3
II.	Special regulations .....	3
1	Subject and scope of application .....	3
1.1	Subject .....	3
1.2	Scope of application .....	3
2	Requirements for the design.....	4
2.1	Description of the construction .....	4
2.2	Test procedure to be used .....	5
2.3	Use, maintenance and service .....	5
3	Validity and specifications for dimensioning .....	5
3.1	Area of application.....	5
3.2	Dimensions.....	7
4	Declaration of conformity .....	7
4.1	General .....	7
4.2	Production control .....	7
5	Associated regulations.....	8
III.	Legal basis .....	9
IV.	Instruction on right to appeal.....	9



## I. General regulations

1. The general building-authority test certificate does not replace the permits, approvals and certificates legally required for construction projects.
2. The general building-authority test certificate is issued without affect the rights, especially private property rights, of third parties.
3. Regardless of additional regulations under "Special regulations", the manufacturer of the design must provide the user of the construction with copies of the general building-authority test certificate and point out that the general building-authority test certificate must be available at the location of use. Upon request, the authorities involved must be provided with copies of the general building-authority test certificate.
4. The general building-authority test certificate must only be reproduced in its unshortened version. Publication in parts requires the approval of the Labor für Stahl- und Leichtmetallbau GmbH. Texts and drawings of advertising must not contradict the general building-authority test certificate. Translations of the general building-authority test certificate must contain the note "This translation of the German original version was not reviewed by the Labor für Stahl- und Leichtmetallbau GmbH".

## II. Special regulations

### 1 Object and scope of application

#### 1.1 Object

The object of the general building-authority test certificate is the glass barriers according to building regulations list A part 3 - issue 2015/2 sold by Q-railing Europe GmbH & Co. KG. The glass panels are linearly clamped at the lower edge and connected with a handrail profile at the upper edge of the glass panel. The glass panels can be installed at a tilt of up to 10° from the vertical.

#### 1.2 Scope of application

The object named above is used in accordance with DIN 18008-4, Additional requirements for barrier glazing according to **Category B**.

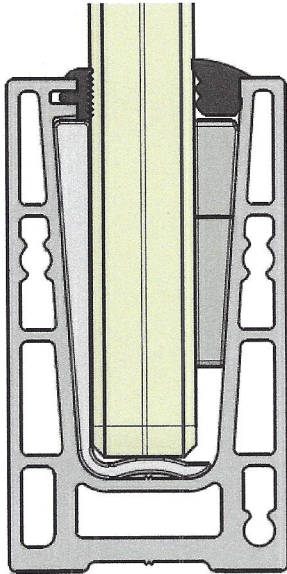


## 2 Requirements for the design

### 2.1 Description of the construction

#### 2.1.1 Mounting

The glazing is mounted linearly at the lower horizontal glass edge. The admissible mounting profile is presented in appendix 1. The profile is presented as an example in the following figure.



**Fig. 1:** EASY GLASS UP profile

The clamping of the glass is achieved by inserting plastic wedges.

The aluminium profiles are fixed on reinforced concrete using chemical anchors from Q-railing (Q VMZ-IG M12) or mechanical anchors (Q SZ-S12), or attached at steel constructions using M12 screws.

At the upper edge of the glass, the panels are connected with a continuous handrail profile. The profile must fulfil the specifications for static dimensioning according to DIN 18008-4, section 6.1.

Impacts may occur from both sides of the glass panel.



### 2.1.2 Glazing

The following glass constructions can be used:

#### Glass built up:

tempered glass (ESG)		6,00 mm
PVB interlayer	mind.	0,76 mm
tempered glass (ESG)		6,00 mm
<b>total glass thickness</b>		<b>12,8 mm</b>

Only glass products in accordance with Building Regulations List A Part 1 or with general building-authority approval must be used for application according to DIN 18008-4. The glass and film thicknesses listed above may be exceeded or heat soaked glass may be used. All glass constructions with intermediate layers with an appropriate general building-authority certificate may be used as laminated sheet glass.

The glass quality must always be evidenced by the manufacturer or supplier with factory certificates or declarations of conformity.

### **2.2 Test procedure to be used**

The test of the barrier function of the glazing was done according to Appendix A of DIN 18008-4. The bearing capacity under impact loading was tested for the standard dimensions of the described glazing using the pendulum impact test. The test results are documented in test report 2017-3011.

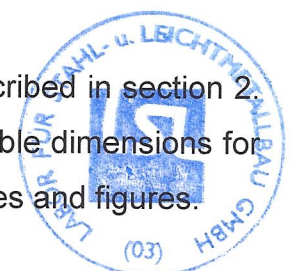
### **2.3 Use, maintenance and service**

The construction must be mounted and secured using suitable measures in such a way that it meets the specified requirements as barrier permanently. The proof of secure anchoring of the glazing construction at the building must follow the applicable technical building regulations.

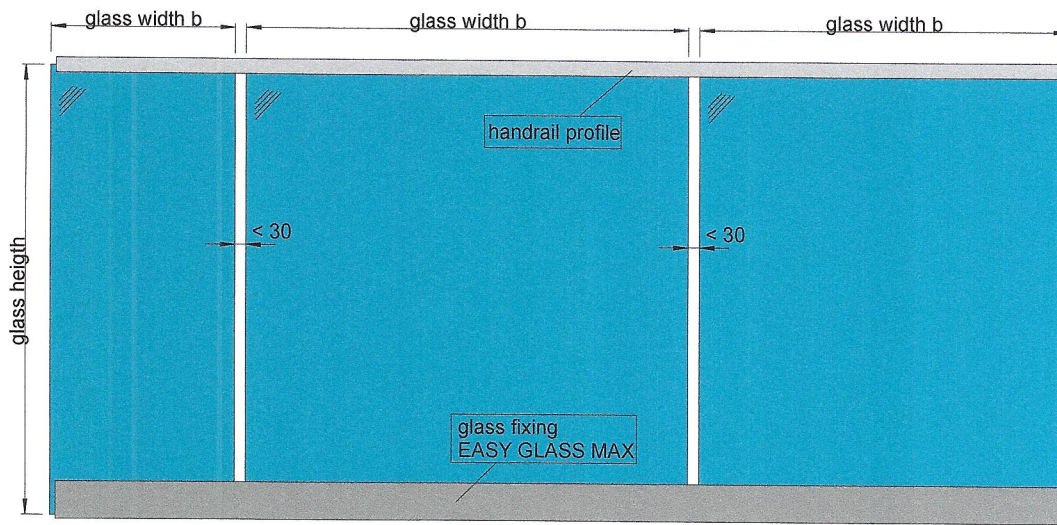
## **3 Validity and specifications for dimensioning**

### **3.1 Area of application**

The general building-authority test certificate is valid for the design described in section 2. The glazing has a barrier function according to category B. The admissible dimensions for the corresponding installation situation are specified in the following tables and figures.



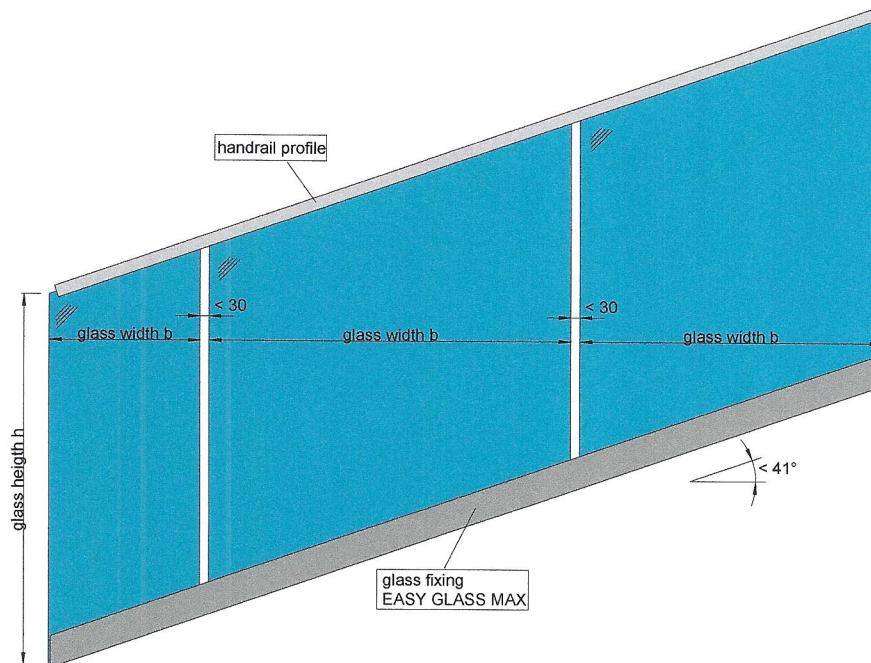
Straight installation:



The following dimensions were proven in tests:

**Table 1:** admissible dimensions for straight installation

Deviations from rectangular shape (flight of stairs):



The following dimensions were proven in tests:

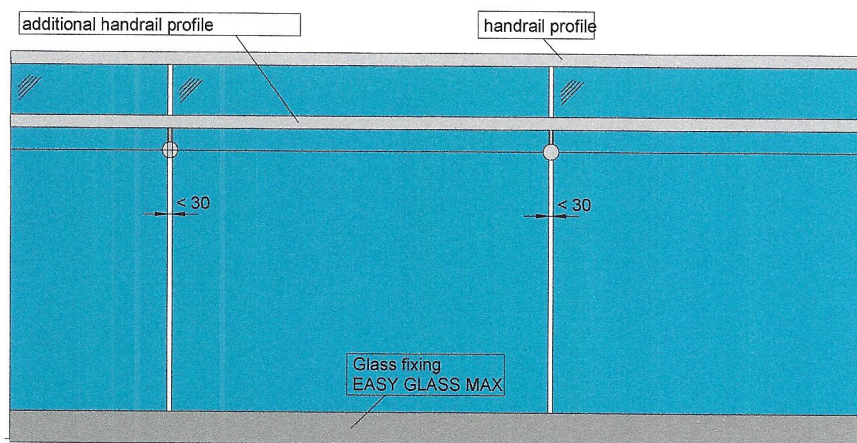
**Table 2:** admissible dimensions for a flight of stairs

Glass built up	Glasswidth b [mm]		Glassheight [mm]	
	min	max	min	max
2 x 6 mm ESG	500	any	500	700



**Other constructive specifications:**

- At least 2 panels with the smallest glass width must always be installed
- If the handrail is anchored at the end, the glass barrier may also consist of one panel.
- The specifications of Q-railing must be observed for the arrangement of the plastic wedges
- An additional, constructive handrail can be used, which is attached in the gaps between the panels using clamp holders (see following figure).

**Additional, constructive handrail****3.2 Dimensions**

For the application, a calculated proof of bearing capacity under static load according to DIN 18008-4, section 6.1 must be provided for the glazing and mounting constructions.

**4 Declaration of conformity****4.1 General**

The design described in this general building-authority test certificate requires a declaration of conformity by the user (contractor) in accordance with Building Regulations List A part 3. In this document, the contractor declares for the client that the described design complies with this general building-authority test certificate in all details.

**4.2 Production control**

A production control must be set up and conducted at every location of application of the design. The production control is understood to be the continuous monitoring of the





production by the contractor, with which he ensures that the design produced by him complies with the regulations of this general building-authority test certificate.

The production control must contain the description and test of the raw materials and components.

The results of the production control must be recorded and analysed. The records must contain at least the following information:

- Name of the design with a description of its components
- Date of manufacture and test of the design
- Results of the test and comparison with the requirements
- Signature of the person responsible for production control

The records must be kept for a minimum of five years and submitted to the supreme building authority in charge upon request.

## 5 Associated regulations

The provisions of DIN 18008-4, Additional requirements for barrier glazing, must be considered for the descriptions. Furthermore, the following standards and information sheets in their current version are referenced:

- [a] Building Regulation List A, B and List C; issue 2015/2 and 2016/1
- [b] DIN EN 14449; Glass in building - Laminated glass and laminated safety glass
- [c] DIN 572, Part 1-2; Glass in building - Basic soda lime silicate glass products
- [d] DIN 12150, Part 1; Glass in building - Thermally toughened soda lime silicate safety glass
- [e] DIN EN 1863, Part 1; Glass in building - Heat strengthened soda lime silicate glass
- [f] DIN 18545, Part 1; Sealing of glazing with sealants
- [g] DIN 18545, Part 2; Sealing of glazing with sealants
- [h] DIN 18008, Part 1-2; Glass in Building - Design and construction rules



### III. Legal basis

This general building-authority test certificate was issued based on section 17 and 19 of the Bavarian building code (BayBO) of 14th August 2017 in conjunction with the Building Regulations List A.

According to § 25 paragraph 2 of the MBO in conjunction with section 23 paragraph 2 of the Bavarian building code (BayBO) of 14th August 2017, an issued general building-authority test certificate is valid in all states of the Federal Republic of Germany.

### IV. Instruction on right to appeal

This general building-authority test certificate can be appealed within one month after issue. The appeal must be submitted in writing or for recording at the Labor für Stahl- und Leichtmetallbau GmbH.

Munich, 01.02.2017

For the management and person in charge of the case

  
Dipl.-Ing. (FH) A. Lorenz  
(Head of institute glass constructions)

