



GS Railing





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CE marking

version 2017.X.EN

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Glass Railing Systems

Glass railing systems are an important part of modern architecture. Thanks to the unique aesthetic values, they are increasingly used inside and outside buildings. Such structures provide an unique character for residential and commercial facilities, such as offices, shopping centers, etc.

Due to the functional character of glass railings, the safety aspects, and particularly the railing strength for various loads depending on application place, are essential during design and assembly stage.

Category of space	Purpose	Horizontal load
A	Residential	0,5 kN/m
B	Office	
C	Meetings and gatherings	1,0 kN/m (3,0 kN*)
D	Commercial	
E	Warehouses	2,0 kN/m

*refers to C5 (public areas susceptible to overcrowding, e.g. concert halls, sports halls including stands, terraces etc.)
Classification according EN 1991-1-1-2004.



For safety reasons, each glass railing should be made in accordance with individual design documentation ensuring the safety of use.

Due to the fact that in full glass railings the glass is the main structural material, it must provide the stability of the structure in all conditions – also in case of partial damage, and this is the reason why such structures are made of tempered and laminated glass of an appropriate thickness and the handrail is mounted on the upper edge of the railing.

The handrail, besides its aesthetic function, is primarily a structural element with the purpose to stabilize the pane in case of damage and ensure that the railing remains in one part. It also protects the exposed edge of pane where the tempered glass is exceptionally vulnerable to mechanical damage.

The method of attachment of the railing to building structure is also very important. The system profile can be directly mounted to reinforced concrete or with use of different mounting brackets.

Due to different design solutions, the Glass System offer includes several variants of profiles. Each of them was tested together with the glass in terms of strength in different assembly configurations. In order to ensure safety, GS Railings have undergone load tests (transfer of horizontal forces, impact resistance).

	GS Railing
Strength	1,0 kN/m
Max. height (mm)	1300
Type of glass	VSG ESG 88.2, 88.4, 1010.2, 1010.4
Approval document	Individual documentation





GSW Railing

GS Railing is a complete system for the construction of glass railings, both inside and outside the buildings.

Glass is the main structural element in this system and that is why the use of aluminium profiles and other assembly elements is reduced to a minimum.

This is an important aesthetic value and provides extraordinary solutions of modern space arrangement.

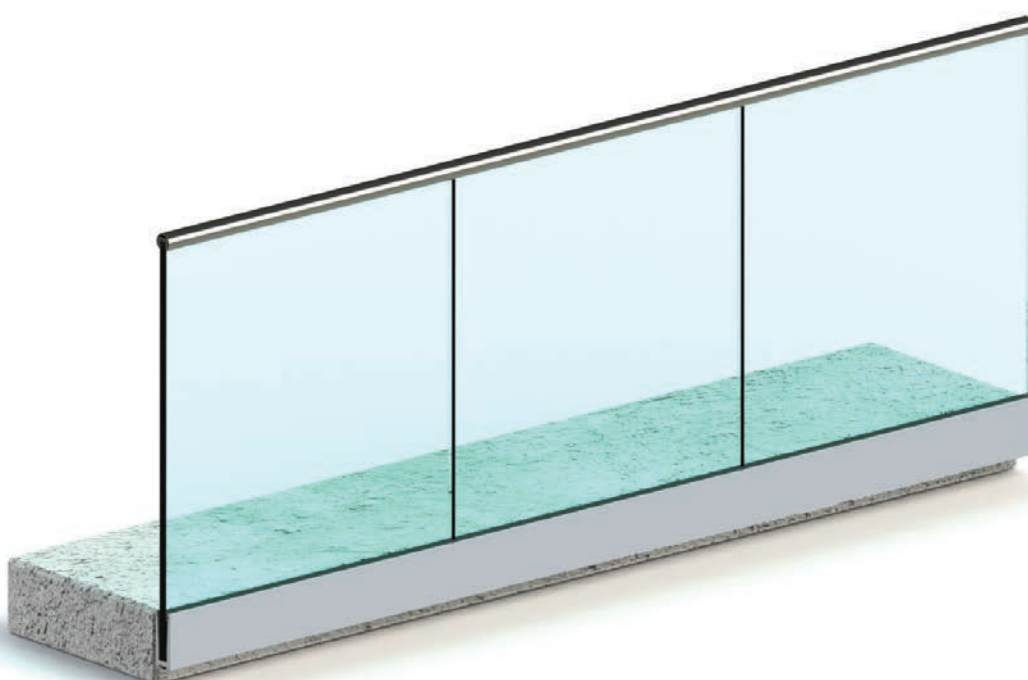
The systems are designed in various variants in terms of attachment to the ground, allowing the precise matching to the design requirements.

It is possible to use various types of handrails on the upper edge of the glass, with different shape and material, depending on the vision of an architect.

Specification

Category of spaces	A, B, C*, D
Strength	1,0 kN/m
Type of glass	VSG ESG 88.2, 88.4, 1010.2, 1010.4
Max. height (mm)	1300
Material/finishing	Anodized aluminium / Powder coated aluminium
Approval document	Individual documentation

*except C5 (public areas susceptible to overcrowding, e.g. concert halls, sports halls including stands, terraces etc.)





Top



Side



Edge

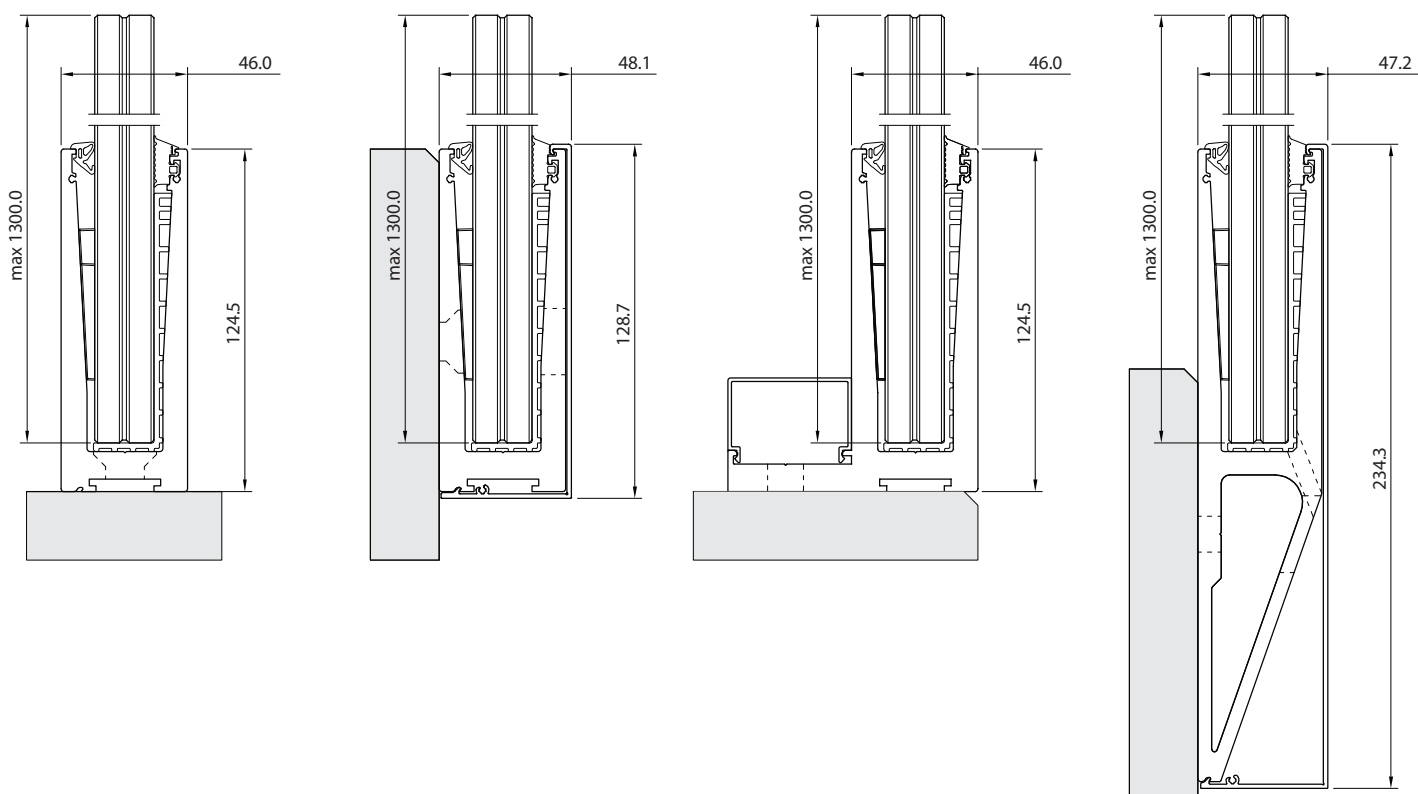


Side-Edge

Product features

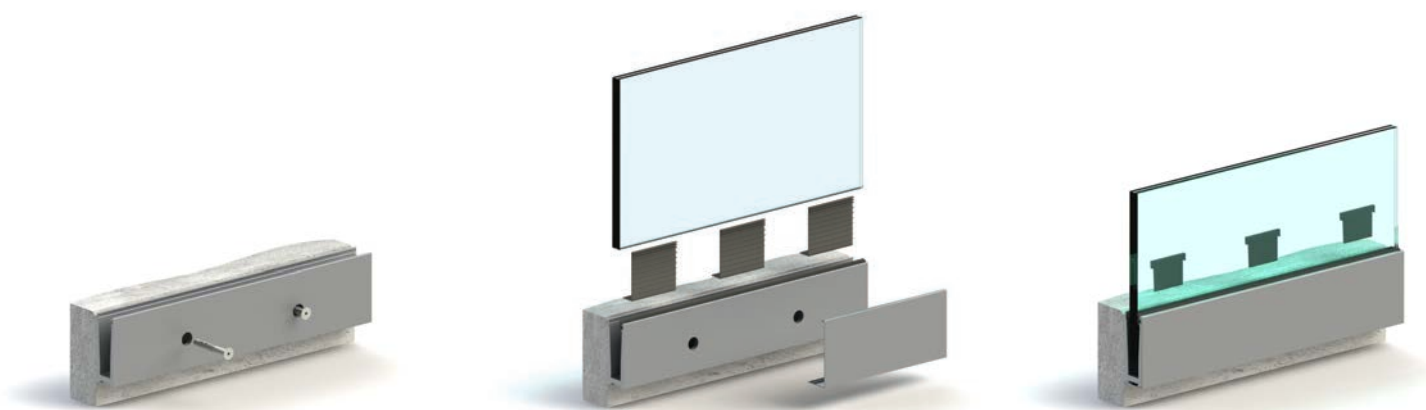
- / four types of base profile 125 mm high, designed to side, top and edge assembly,
- / guarantee of stability and strength – glass fitted with special wedges,
- / quick and easy installation of railings,
- / the possibility to install glass after completion of all other works (no risk of damage),
- / the possibility to use different types of handrails on the top edge of the glass – e.g. stainless steel, aluminium or wood.





Installation sequence

- ✓ the profile is installed to concrete or steel substructure;
- ✓ the plastic pads are attached to the glass profile, the gasket is then installed in the profile on the outer side of railing;
- ✓ the glass is set in the profile;
- ✓ the glass pane is stabilized with the wedges, the gasket is installed on the inner side of the railing.

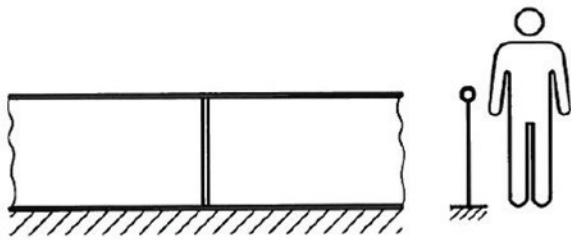




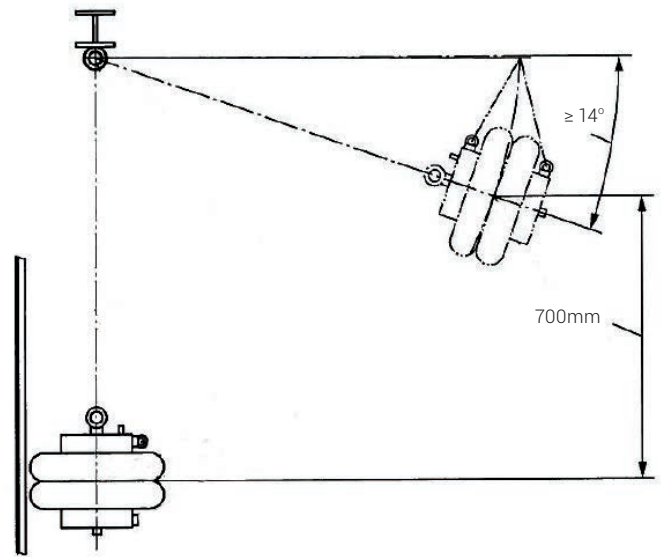
Strength tests

Within the scope of strength tests the GS Railing systems were tested by pendulum impact, in accordance with the standard DIN 18008-4. The standard classifies railings of this type as the category B, with strictly defined test procedure.

The test results confirmed the parameters guaranteeing the safety, which allows using Glass System railings according to their intended purpose.



Category B in accordance with DIN 18008-4



Pendulum impact in accordance with DIN 18008-4





Sales materials

Katalogi



GSW Pro



GSW Office



GSW Office Plus
(available in Q2 2018)





GSW Office Door
(available in Q2 2018)



GSW Light



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