

Data sheet for platforms, staircases, ladders

The purpose of this data sheet is to clarify the technical guidelines for trade fairs and exhibitions of Messe Essen GmbH.

Platforms on trade fair stands and access to them require particular consideration, as there is a higher risk of accidents. This is particularly noteworthy if visitors to the event are to have access to these fixtures. The objective of the protection measures is to prevent people from falling.

Construction of a platform

The substructure of platforms must be made of non-combustible building materials. The floor must have fully sealed joints and be free of trip hazards.

If the area is accessible to visitors, protection against falls is required for people for platforms higher than 20cm.

Fall protection

In the visitor area, fall protection in the form of a guardrail, a barrier, a wall, a glass wall or a barrier grid must always be provided. The minimum height required is 1.10m. If children are expected to be present, the fall protection must be designed in such a way that it is difficult for them to climb over. The distance between the parts of the guardrail must not exceed 12 cm at the sides.

Required load capacity

In accordance with EN 1991-1-1, platforms and staircases must have a certain load capacity, depending on their use (extract from the DIN standard):

Use	Traffic load
Office space – not public	2 kN/m ²
Platform which is accessible to visitors, fixed seating	5 kN/m ²
Platform which is accessible to visitors, no fixed seating	7.5 kN/m ²
Staircases	5 kN/m ²

The fall protection must be able to withstand the pressure of a group of people. According to EN 1991-1-1, at least 1 kN/m is applied at spar height. This value is not adequate when significant pressure is applied by visitors. 2 kN/m is a good basis for the planning, provided no extreme situations are expected.

Use of the areas underneath a platform

The area beneath a platform can of course be used. If this is the case, the regulation on stand space overbuilding according to point 4.92 of the technical guidelines applies!

Access to the platforms

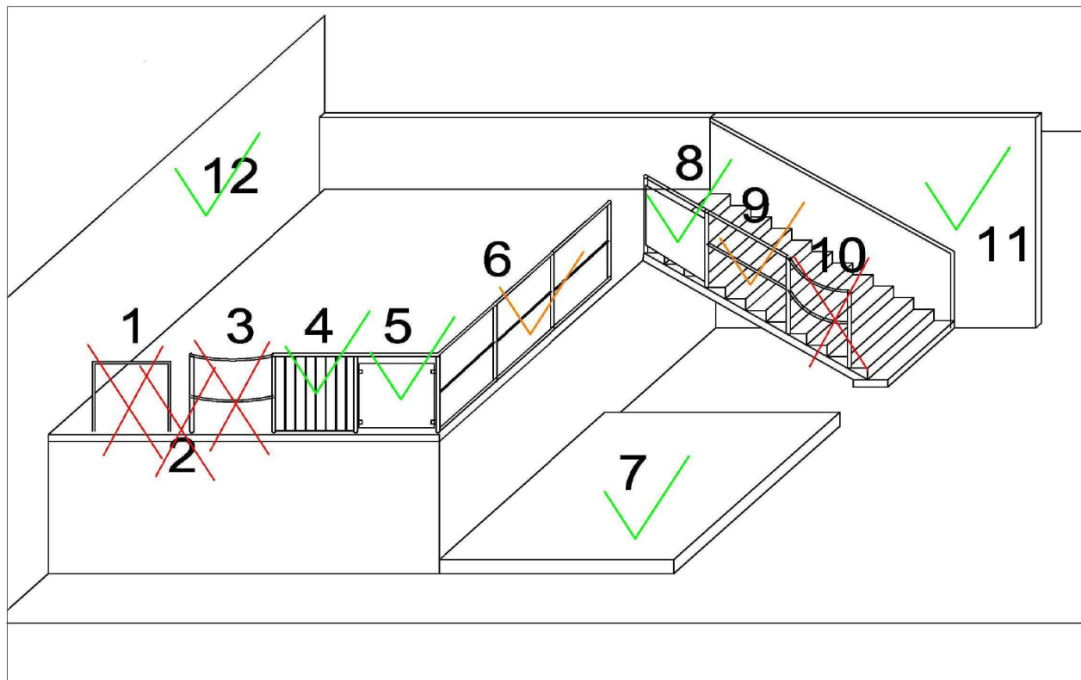
Access for visitors should be via a staircase. Staircases require a fixed handrail on both sides without free ends. The requirements for the handrail in terms of static stress and structural design are the same as for the guardrails (see above). The maximum step height of a staircase is 19cm. The step height must be at least 26cm.

From a platform size of 100m², a minimum step width of 120cm is required. A second, independent escape route from the platform to the hall is also required.

Areas with no visitor access

Occupational health and safety protection regulations apply here. In particular, the need for fall protection differs from the above requirement and is specified in BGV C1 §6. You can obtain these regulations from your employers' liability insurance association.

Explanatory sketch



Key:	1	Not permitted. Too low and the central strut is missing
	2	Not permitted. Excessive distance between guardrail parts 3 + 10 is not permitted. Use of ropes as spars. No secure grip.
	4	Permitted. Grille makes it difficult to climb over.
	5 + 8	Permitted. Filled area below a handrail with a secure grip. Makes it difficult to climb over.
	6 + 9	Permitted subject to conditions. Not permitted if children are expected to be present.
	7	Permitted. Low platform up to 20cm does not require a guardrail.
	11	Permitted. Continuous, endless handrail on both sides of the stairs.
	12	Permitted. Rear wall as fall protection. Caution: in this case too, evidence must be provided that the required weight of a group of people can be borne.

Ladders

Ladders are not permitted for visitors. The relevant accident prevention regulations apply to other use of ladders.