

# Notice: Outdoor stand constructions

This notice gives the technical specifications and requirements for stand constructions for which permits are required and which are to be erected on the outdoor areas on the Exhibition Grounds of Messe Berlin GmbH. If not included as a supplement to this notice, the **Technical Directives** of Messe Berlin GmbH shall apply ([www.messe-berlin.de](http://www.messe-berlin.de)).

## 4.8.01 Definitions, Explanations

According to the Berlin Construction Regulations [BauO Bln, § 2 (4)], all stand constructions erected on the open air grounds and intended for use at events, as well as special structures, are defined as temporary structures. Accordingly **special structures** must in all cases conform to the requirements of the valid public provisions of the Berlin Construction Regulations [§ 52] and the following conditions and rules in their current versions:

- BetrVO – Regulation concerning the uses of special structures [Operating Regulation] (for places of public assembly in accordance with section 4 – BetrVO)
- M-FIBauR Standard Directive for the Construction and Use of Temporary Structures
- MVStättV – Standard Regulation for the Construction and Operation of Places of Public Assembly [Standard Regulation for Places of Public Assembly]
- DIN 4112 Temporary Structures; Technical Building Regulations Concerning their Dimensions and Design

## 4.8.02 Open air grounds

The open air grounds encompass all areas outside the existing exhibition halls. These are as follows:

- **Forecourts and intermediate courtyards:** around and next to the exhibition halls, mostly with an even paved or asphalt surface suitable for vehicles.
- **Summer Garden:** bounded on the north side by lawns: in front of Halls 18 and 20. The surface mainly consists of an uneven combination of gravel and grass or non-compacted lawns.
- **Funkturm inner courtyard:** consisting mainly of an asphalt surface suitable for vehicles, together with individual lawn areas.
- **Rail track area (south):** Rail track set in concrete, interspersed with small concrete paving stones.
- **South Entrance / Forecourt:** slabbed.
- **Parking areas P 3 / P 15 / P 17 / P 18 / external galleries** (in front of H. 18 and H. 20): level surface for vehicles, mainly with small paving stones.

## 4.8.03 Stand structures requiring approval

The stand structures in the open air grounds that require approval include all constructions that are either classed as regular temporary structures in accordance with § 75, BauO and M-FIBauR or are of the corresponding type and method of construction,

- marquees with a ground area of  $\geq 75.0 \text{ m}^2$
- stages, including roofed areas
- equipment for games/sport or pleasure
- Free-standing scaffolding and advertising installations / banks of monitors
- Free-standing masts and signalling installations for exhibition or presentation purposes
- All other stand structures suitable for pedestrian traffic and / or covered stand construction installations:
  - platforms, gangways:
  - overhead cover:
  - single or multiple storey pavilions and / or container facilities;
  - installations with fully enclosed cinema, viewing or visitor rooms.

## 4.8.04 Barrier-free access for trade fair visitors to stand structures suitable for pedestrian traffic

If stand installations suitable for pedestrian traffic are to be accessible to the general public, the main entrances and exits of the stand installation must be suitable for the disabled and for wheelchair users. Alternatively the stand operator / exhibitor shall designate operational, organizational measures on the stand (stand personnel or similar persons to provide assistance) to ensure safe access for wheelchair users.

## 4.8.05 Examination / acceptance of structures requiring permits

In such cases the requirements of the Technical Directives, Item 4.2.1 apply

## 4.8.1 Stand security

All outdoor stand structures requiring a permit must be of the required stability. Exhibitors are responsible for ensuring the load-bearing capacity and stability of such structures.

Proof of stability must be supplied in all cases.

The Construction Regulations for Berlin as well as the directives and rules stated in Item 4.8.01 apply.

### 4.8.1.1 Live loads / Design loads

For the upstairs floor of a two storey stand structure, the live loads shall be determined in accordance with the specifications of DIN 1055-3, Tab 1 or in accordance with the Technical Directives, Item 4.9.3.

### 4.8.1.2 Wind loads

In the case of all stand structures on the open air grounds the regular wind pressure and wind suction loads must be taken into account in accordance with DIN 1055-4 or EC 1 (DIN ENV 1991, Part2 – 4) for all load-bearing roofs and external walls, and evidence must be provided thereof.

With reference to the location of the trade fair: Berlin (height of site: approx. 55 m above mean sea level) the following, site-related parameters and simplified shear forces are obtained:

Berlin: Wind zone 2 (inland area)

ave. wind speed  $v_{ref} = 25,0$  m/s

and wind shear force:  $q_{ref} = 0.39$  kN/m<sup>2</sup>

Simplified speed of gusts at

stand structure heights up to 10 m  $q = 0.65$  kN/m<sup>2</sup>

stand structure heights >10 – 18 m  $q = 0.80$  kN/m<sup>2</sup>

The open air fair grounds are strictly classed as a Category IV site (urban area).

However, this does not apply to *temporary structures* with a proven reduced wind pressure as defined by DIN 4112, 4.5.2 :

stand structure heights up to 5 m  $q_{red} = 0.3$  kN/m<sup>2</sup>

Other reductions apply to *temporary buildings*, as defined by DIN 4112, 4.5.3 for the following:

**stand structure heights up to 5 m  $q = 0.15$  kN/m<sup>2</sup>**  
**Stand structure heights > 5 m  $q = 0.25$  kN/m<sup>2</sup>**

are only permitted if, due to the type, form and usage of the structure, the required cessation of operations when the wind force reaches 8Bft. ( $\rightarrow v_{wind} = 20$  m/s – even if this is only in gusts -) is ensured.

If operations need to be suspended, following the call for such action by Messe Berlin GmbH (see Item 4.8.6 - Warning in the event of bad weather) the following measures shall be implemented without delay by the exhibitor or stand operator:

1. The stand structure shall be secured in accordance with the terms of the operating permit (inspection log), including closure of entrances to marquees, the lowering of stage covers and/or sheets at the sides of the stage.
2. Complete evacuation of visitors, guests and personnel from the stand structure.
3. If necessary the entire open air area should be cleared and safety sought immediately in the exhibition halls, upon the instructions and under the local supervision of the security services of Messe Berlin GmbH.

#### 4.8.1.3 Snow loading

It is not necessary to consider snow loading with regard to the stand construction during the snow-free period (April - Oct.) In the case of stand construction measures during the winter (Nov. - March) the regular snow loads must be taken into consideration in accordance with DIN 1055-5 for all supporting roof structures and for accumulated drifts on all wall structures ( $h_w > 0.5$  m) and evidence must be provided thereof:

With reference to the location of the trade fair: Berlin (height of site: approx. 55 m above mean sea level) the following, site-related minimum design loads shall apply:

Berlin: snow load zone 2

min. snow load (minimum amount):  $s_k = 0.85$  kN/m<sup>2</sup>

In the case of stand constructions that are classified as *temporary structures*, reduced snow loads in accordance with the old DIN 1055-T.5 (June 1975), 3.4.3 may continue to be applied: red.  $s_o = 0.25$  kN/m<sup>2</sup>, if the accumulation of snow during the time that the installations are being operated can be demonstrably prevented as a result of suitable stand construction measures such as heating (>12° C under the roof) or short-term clearance.

#### 4.8.1.4 Parapets and railings

In such cases the requirements of the Technical Directives, Item 4.9.3 apply, i.e. a horizontal load:

$q_H = 1.0$  kN/m at cap height.

For all other walls rising through all stories, or free-standing wall elements, evidence must be provided of compliance with DIN 1055-4 (see also Item 4.8.1.2) in order to provide sufficient stability under regular wind loads.

#### 4.8.1.5 Permissible floor loads

As a rule pedestrian and vehicle areas with asphalt or paved surfaces are constructed and marked as emergency fire accesses in accordance with the bridge category SLW 30 (DIN 1072).

### 4.8.2 Stand construction materials

The requirements of the Technical Guidelines, Item 4.4.1, apply to all stand construction materials.

Structures built onto existing exhibition halls

Structures intended to be built in the immediate vicinity of or onto existing halls or buildings require testing and the express approval of Messe Berlin GmbH (Dept. ST 21).

In such cases all supporting and cladding elements of the stand construction up to a distance of  $\leq 5.0$  m from the external wall of the hall must be constructed using non-flammable materials.

Tensioned areas that have an effect on stability and mountings attached to necessary weights or to maintain the position of free-standing masts or advertising installations must be made of non-flammable materials.

#### 4.8.2.1 Glass

Only suitable safety glass may be used in the construction of all stand structures on the outdoor areas.  
The requirements and terms of the following technical construction regulations apply exclusively in their current, valid form.:

- **TRLV** – *Technical rules for the use of linearly installed glazing*
- **TRAV** - *Technical rules for the use of safety glazing*
- **TRPV** - *Technical rules for the measurement and installation of glazing supported in place*

Forming the basis for all the specifications referred to herein, and in accordance with the intended purpose, all glass construction must be

- vertical glazing, made of safety glass if necessary;
- overhead glazing,
- glazing to support the weight of persons.

In no circumstances may panes of glass with damaged edges be used.

Any exposed edges of the glass should be worked in such a way or protected so as to prevent the risk of injury. Room-high, all-glass components must be marked at eye-level.

#### 4.8.3 Floor areas

Carpets and other surface coverings supplied by exhibitors must be laid in such a way as to prevent accidents and may not extend beyond the confines of the stand.

All the materials used must subsequently be removed from the surfaces without leaving any residues.

Oil, fat, paints and similar substances must be removed immediately from the surfaces.

Existing surfaces may not be painted or covered in any other type of coating.

##### 4.8.3.1 Anchor points in the floor

In order to obtain written approval for any anchor points for marquees, tensioned surfaces, flagpoles and other work in the ground on the outdoor areas, precise positional plans must be submitted in advance to Messe Berlin GmbH, Abt. Veranstaltungstechnik ST21.

No anchoring of any kind is permitted in the ground on the open air site without written approval.

Before commencing any work in the ground on the site the engineering department Veranstaltungstechnik ST 21 of Messe Berlin GmbH must be notified.

The ground will be restored to its original state by Messe Berlin GmbH or its contractors, for which charge will be made.

#### 4.8.4 Interference with the permanent building fabric

Roadways and pedestrian areas may not be occupied or obstructed by stand structures or other stand installations, and this applies during construction and dismantling too.

To allow access for the fire service these areas should be kept clear over their entire width, including marked display areas.

Existing safety equipment (including fire hydrants) must not be damaged, contaminated or altered in any other way. They should not be blocked and made inaccessible by stand structures nor should they have any weights placed on them.

Exhibitors are not permitted to carry out any work on the existing rails and track facilities at the south-western end of the grounds.

#### 4.8.5 Advertising measures, presentations, flag poles

The requirements of the Technical Directives, Item 4.7.7 apply.

Advertising activities may only be carried out on one's own stand area. Advertising measures must not cause obstruction or interference to gangways or to neighbouring stands.

Shows / product presentations with performance elements must be registered beforehand with the engineering department (Abteilung Veranstaltungs-technik) ST21 of Messe Berlin GmbH.

Flagpoles / masts on the outdoor grounds must not exceed a height of 8.0 m.

#### 4.8.6 Severe weather warnings

If severe weather is expected with forecasts of winds with a force of **> 7 Bft**. ( $v = \text{approx. } 15 \text{ m/s}$  – including in gusts) a general severe weather warning will be issued by Messe Berlin GmbH to all exhibitors on the open air grounds.

Thereupon all exhibitors with *stand constructions with a reduced wind load* or with *temporary buildings* must immediately undertake all the measures stipulated in Item 4.8.1.2 and cease their activities.

The instructions of the on-site security staff and other employees of Messe Berlin GmbH must be complied with immediately and in all cases.

#### 4.8.7 Dismantling, restoration and handing back of the site

All display areas must be handed back to Messe Berlin GmbH clean and restored to their original state at the end of the event.

All installation work that has been carried out on the stand such as the spreading of gravel and the inclusion of approved anchor points if required etc. must be removed.

Any resulting building rubble should be immediately removed by the contracting firm appointed by Messe Berlin GmbH.

Exhibitors must maintain site security until the area has been completely restored and handed back.

If the restoration work has not been completed by the stipulated end of the dismantling period Messe Berlin GmbH shall be entitled to arrange for it to be done by its contractors at the expense of the exhibitor / stand construction firm.

Grass areas shall be restored exclusively by Messe Berlin GmbH at the expense of the exhibitor / stand construction firm.