



Last update  
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## Stability safety of folding pavilions/ filigree structures and similar\* in outdoor areas

All folding pavilions/filigree structures and similar\* structures must be secured against sliding, tilting and lifting in position by suitable measures (e.g. ballast weights and anti-slip mats/load securing mats).

Ballast weights must be attached to the supports in a tension- and pressure-resistant manner so that they are constantly activated

With additional anti-slip mats, a higher efficiency of the dead weight and ballast can be achieved. The anti-slip mats must be placed over the entire surface under the supports and the ballast weights.

**The erection of structures in the outdoor exhibition area without the above-mentioned safety measures or equivalent measures is not permitted.** This applies in particular to folding pavilions and comparable filigree structures. If no adequate measures are taken to secure the position, the structure must be removed.

### Ballast pavilions

If no static proof of the stability of a folding pavilion is provided, at least the following ballast weights must be installed for the standard sizes shown here.

#### Required total weight [kg]

Dimensions (LxWxH) [m]	with anti-slip mats	without anti-slip mats
3x3x3,3	93	185
4,5x3x3,3	139	278
4x4x3,3	124	247
5x5x3,3	154	309
6x4x3,3	185	371

- The required total weight is to be distributed evenly among all supports of the pavilion.
- If several pavilions are erected next to each other, the total weight stated must be multiplied by the number of pavilion.
- The ballast does not replace any necessary measures during strong wind events.



Last update  
23.11.2023

### Ballast inflatable archways

If no static proof of the stability of the structure is provided for inflatable archways and similar structures, at least the following ballast weights must be installed:

#### Required total weight [kg]

Dimensions (LxWxH) [m]	with anti-slip mats	without anti-slip mats
4x3x0,5	350	650
6x4,25x0,75	850	1,550
8x5x0,9	1,350	2,450
10x6x1,1	2,300	3,400

The required total weight is to be distributed evenly over all bracings of the archway and the anti-slip mats are to be laid out over the entire surface under the ballast.

The distance between the ballast and the archway must be at least 2 m (see figure 1).

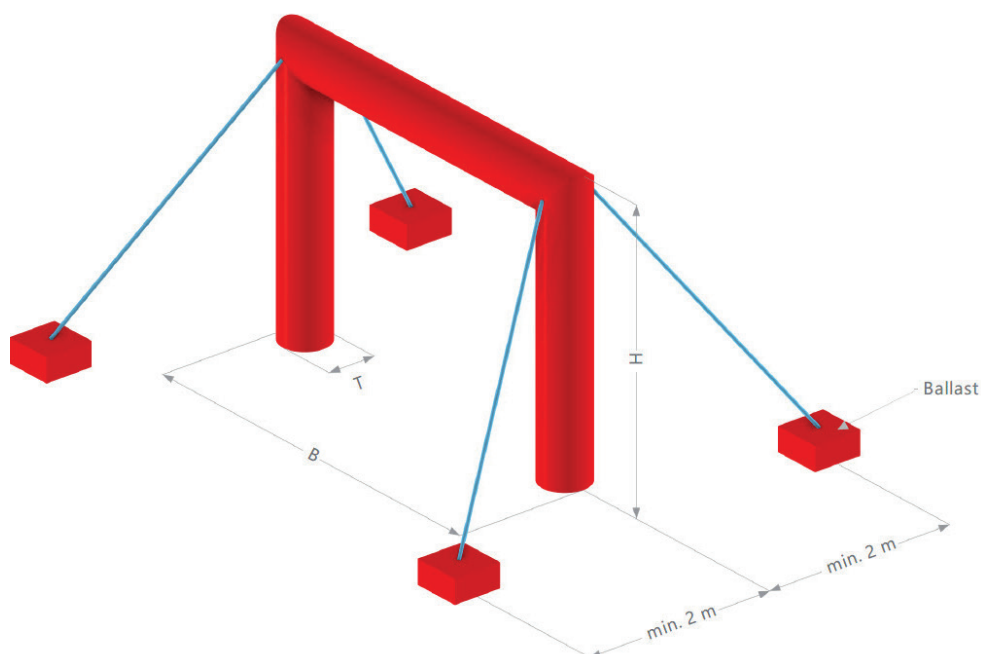


Figure 1



Last update  
23.11.2023

### **Measures in the event of upcoming wind**

The wall tarpaulins must be removed on all sides when the wind increases. If the wind force increases further, operation must be stopped and the roof tarpaulin must also be removed or the entire structure must be demounted. The wind force above which protective measures must be taken or operation must be stopped is determined during the inspection during assembly, in accordance with the design of the structure on site.

### **General arrangements & arrangements in case of absence**

A contact person who can be reached at all times must be appointed for the exhibition stand. This person will be notified by Messe Frankfurt in the case of upcoming weather events in order to implement the measures specified in the static acceptance in good time. At the same time, the exhibitor must keep an eye on the weather situation in order to be able to react quickly and take appropriate measures in the event of wind.

In the evening before leaving the stand, the structure must be completely taken down or all wall and roof tarpaulins removed. Alternatively, a stand guard can be deployed who can quickly take appropriate measures to secure the position of the structure at any time.

If no dangerous winds are to be expected, pavilions, for example, can also be reduced to at least half their height and left standing overnight with the side walls closed.



Last update  
23.11.2023

## Our recommendations for you

### Recommendations for ballast

You should secure your pavilions with weights. These are available in various versions depending on the surface of the gazebo. In addition to sandbags (Fig. 1) or stackable cast iron weights (Fig. 2), there is also the option of filling special canisters with steel balls, sand or water (Fig. 3).



Fig.1



Fig. 2

Here you will find further information and ordering options for cast iron sandbags and weights.

Here you will find further information and ordering options for canisters.



Fig. 3, Photo: [www.ballast-produkte.de](http://www.ballast-produkte.de)

### Recommendations for anti-slip mats:

Anti-slip mats are available in various designs and sizes. (See examples on the right, Fig. 4 and 5.)

Please note that the anti-slip mats must be laid over the entire surface under the uprights and ballast weights.

Here you will find further information and ordering options for anti-slip mats.



Fig. 4, Photo: [www.antirutschmatte24.de](http://www.antirutschmatte24.de) Fig. 5, Photo: [www.antirutschmatte24.de](http://www.antirutschmatte24.de)

### Recommendations for fastening:

Lashing straps are suitable for additional fastening. These are available in different versions and from different manufacturers.



Fig. 6, Photo: [www.sasseil.de](http://www.sasseil.de)