

Dear Sir or Madam

You have decided on purchasing the floor system FLOOR and more® of the Lindner AG. We ask you to observe the following instructions in order to guarantee an acceptable functioning of this system floor for the long term after its installation in a professional fashion.

1 Climatic conditions

The room temperature should range between 15°C and at most 25°C. The relative air humidity should range between 40 und 65 %.

Any change in the climate beyond the tolerances specified will cause a swelling or shrinking of the panels according to the material used.

2 Cut-outs

Subsequent cut-outs in the FLOOR and more® system can be made if the following points are considered:

- A distance of at least 10 cm in the edge area respectively to uprising building parts has to be kept.
- Supporting pedestals, stringers or bridging profiles have to be installed according to the load requirements and the shape of the cut-out.

3 Revision openings / raised floor channel

If the panels of revision openings are taken out of the floor area or channels for later installation works or similar, it has to be paid attention to that this is done like it is shown on the following illustrations.

The system may only be opened or closed by qualified personnel.

3.1 Taking out of a panel

Place the lifting device in the centre of the panel edge with a short distance to the edge of approximately 5 cm (Illustration A) and lift the panel slightly to loosen it. Then place the lifting device in the middle of the panel and lift it vertically (Illustration A).

With parquet coverings it is recommended to lay the taken out revision panel on a soft pad (e.g. a cloth or similar) in order to prevent the surface from scratching.

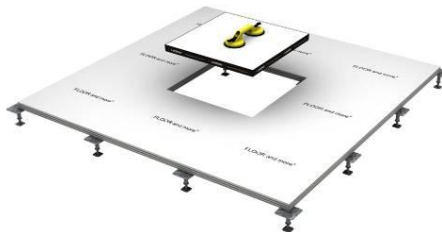


Illustration A

3.2 Inserting of panel

Place the lifting device on one side, hold the panel with your hands, lay it with one side on two pedestals, push it to the neighbouring panel and lower the panel with the lifting device. If with the use of a velour covering, the first row of the piles of the adjacent panel is pinched in, the proper, original state can be restored by "lifting" the inserted panel a bit.

Attention:

- Do not put your fingers in the gap between the panels with the opening and closing of the system – danger of injury! (Illustration B)
- Do not try to take up panels with unsuited tools like a screwdriver or a chisel (Illustration C).
- Detach the lifting device immediately after the use (a vacuum causes the detachment of the covering)
- Do not put taken out panels down on the panel edge.



Illustration B

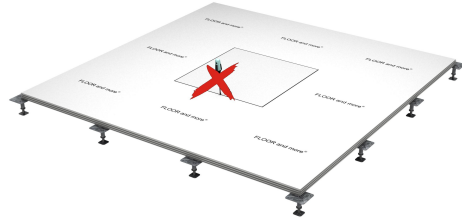


Illustration C

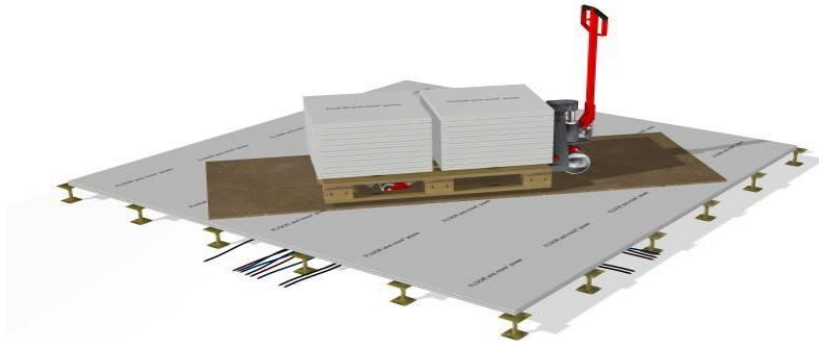
4 Cable installation

Do not draw in cables over the edge of the floor system or a panel. Do not pull off or damage pedestals through overstraining with the installation of cables in the cavity. Good idea: Lay cables in from the roll.

5

Protective measures

5.1 Extraordinary loading



The floor has to be covered with planks, chipboards or steel plates with the transport of heavy loads. The floor covering and the gluing is protected this way and the loads are distributed to a larger area on the floor system.

Dynamic loads from lifting carts, forklifts etc. may not be included in calculations by simply transferring the wheel loads to static loads. In such cases the DIN 1055 as well as the maximum permissible loads of our raised flooring systems have to be observed.

The tests and the classification are made according to current standards. The permissible load indentation points are defined in the application guideline to the DIN EN 13 213.

5.2 Continuous contact with water

Continuous contact with water has to be absolutely avoided as this leads inevitably to a damaging of the floor system.

6 Floor coverings

6.1 On site applied coverings

The construction and gluing recommendation for FLOOR and more® has to be considered and followed with the application of the covering.

6.2 Factory-applied coverings

Peculiarities with parquet surfaces

Parquet is a natural product and has the characteristics of swelling and shrinking which are caused by the absorption respectively the evaporation of water (but also of organic solvents). In dependence of the wood species and growing direction there will appear different swelling and shrinking dimensions.

We adjust our FLOOR and more® system with factory-applied parquet covering to a standard room climate of 40 % relative air humidity.

We guarantee a perfect condition of our parquet with keeping an appropriate climate for wood of 18 – 22°C and a relative air humidity of 35 – 55 % during installation and usage.

For deliveries to Scandinavia, the wood is adjusted to the expected lower air humidity of 35 % relative air humidity. This corresponds to a wood humidity for usual central European woods of 6.5 %.

Herewith, a using climate of 18° and 22° C and a relative air humidity of 25 – 45 % has to be kept.

Deviations of the above mentioned climate conditions will lead to a swelling or shrinking of the parquet upper layer which is a material induced appearance. In addition to the form change of the parquet / the panel, tensions in the adhesive joint may occur due to the different “working” of the panel and the parquet fin.

When the air humidity is too low, joints between the parquet layers and in an extreme case cracks and/or a detachment of the parquet may occur. If the air humidity is too high, this can lead to a swelling of the parquet upper layer. This can lead to a more or less intense deformation of the surface of the panel (according to the design of the parquet). The “working” of the wood is an material induced appearance, which we neither can influence nor for which we can give a guarantee. Through an appropriate shear fast gluing and the using of only slightly swelling floor support materials we are able to decrease the processes caused by the climate, but we can't prevent them.

The “working” respectively the change of the wood humidity caused by the climate can be influenced positively by a lacquer coating of the surface. The varnish coating delays the moisture absorption and evaporation of the wood and compensates in this way the short-term changes of the climate. A with floor oil treated parquet surface reacts on changing climate conditions, similar to a not treated surface, very fast. The humidity exchange respectively the shrinking and swelling is not delayed compared to a not treated surface and happens within a short time. A treatment with oil is used for an improvement of the optic and is useful for the protection of the parquet upper layer of contamination.

Besides the surface treatment, also the choice of the design and the sort of wood influences the shrinking and swelling of the parquet and with that also the usage of the floor.

The swelling is strongly depending on the direction. Clearly much more changes appear across the grain / in the direction of the bar than parallel to the grain.

Referring to the usage conditions, lengthwise and across glued parquet designs like for example lacquered oak cubes are therefore significantly less sensitive and more robust than oiled beech large baton 2. In the scope of a normal usage climate, we also propose to generally plan an edge joint of approximately 8 – 10 mm at arising building parts. The installation should be permanently supervised through a thermohydrograph which immediately shows any change respectively an overstepping of the climate.

At larger areas it is recommended to discuss this topic with the project manager or the product management.

With expected differing climate conditions, the Product Management has also to be consulted and if necessary, it has to be set a wood humidity which is adjusted to the using conditions.

6.3 Cleaning and maintenance instructions

Basic principles conditional to the system have to be considered for the cleaning and maintenance of the floor coverings on system floors. You are provided with information on that topic by our as well as the covering manufacturer's cleaning and maintenance guideline.

Especially with parquet floor coverings the cleaning and maintenance should exclusively be done with the products which are proven and recommended by us. Other maintenance products could have negative effects on the surface coatings which were applied by us. It can lead to the destruction respectively discolouring of the upper layer. Please notice our cleaning and maintenance instructions.

Should you have any further questions, however, we are gladly available to provide you with any information.

Telephone 0 87 23 / 20-26 51 Product Management Flooring Systems