Concepts

Products

Service

Installation guideline

MR_SB_1_FLOOR and more®

Lindner AG

Dry hollow floor system FLOOR and more®

Lindner | Building New Solutions

1. Table of contents

2. Explanations to this guideline

Dear customer

We are pleased that you have decided a product of the Lindner AG.

This guideline has been created with pictures and texts for the necessary work steps.

Please read and pay attention to this guideline in order to ensure a smooth installation. Important notices and information for the installation of the raised floor system are included.

Please also pay attention to all safety and warning notices.

Not all detail information to all steps of the installation can be described resp. shown for reasons of clarity.

Texts and drawings published in this document are exemplary. Any warranty for the completeness is shut out and any complaints are excluded. However, please contact us if you have further questions or if you need help.

The installation by trained and professional installation staff is mandatory. The lifetime and safety is increased by a careful and regular maintenance.

Please keep this guideline thoroughly!

The information in this guideline corresponds to the current state of our knowledge and shall inform about the installation of our products. They are therefore not intended to guarantee certain properties of the products or their suitability for a specific application. Buyers and users have therefore to evaluate autonomously the suitability of our products for the demands presented under the respectively prevailing conditions. If you have questions to the possibilities of application and use of our floor we are pleased to assist you.

2.1. Used warning notices

⚠ WARNING	Marks a danger which can immediately lead to an **injury**.
Type of danger and its sources *Consequences* ➲ *Measures for avoidance.* ➲ *….*	

ATTENTION	Marks a danger which can cause a **damaging or destruction of the product**.
Type of danger and its sources *Consequences* ➲ *Measures for avoidance.* ➲ *….*	

2.2. Symbols

 Notice for the avoidance of material damage	 Admissable action
 Non-admissable action	 See text
 See pictures	 See separate installation guideline acc. to indication
 Optional building parts, can be ordered on request	 Remove packaging or building part and dispose properly.
 Test / measure	

3. General indications / installation conditions

Indications

- Please read the following instructions thoroughly before installation!
- This installation guideline is also valid for the dry hollow floor systems FLOOR and more® power, FLOOR and more® sonic and FLOOR and more® acoustic.
- The installation of FLOOR and more® requires special experience and should only be done by “instructed professionals”.
- The floor areas have to be sectioned resp. arranged sensibly before the start of the installation. An installation plan has to be issued.
- Respective expansion joints acc. to the raised floor type and covering have to be planned and strictly kept.

- The delivered material has to be checked on quantity, identity, quality and completeness. Complaints in installed condition cannot be accepted. Damage has to be announced immediately in order to maintain claims.
- The materials have to be stored in dry and air-conditioned rooms (20 ± 5 °C, 40 to 65 % relative air humidity). Do not store outside and protect it from humidity.
- In order to avoid a deformation of the panels they have to be stored on a level surface.
- The material should be acclimated at least 48 h before the installation in the rooms of the installation.
- With de-piling it has to be paid attention that the FLOOR and more® panels with factory-applied coverings are always laid top side on top side and bottom side on bottom side.

ATTENTION

- The admissible climate during installation is 20 ± 5° C and the admissible relative air humidity is 40 to 65 %.

- The installation may only be started if the admissible climate for the installation is reached and the facade is closed.
- The subfloor has to be dry, even, solid as well as free of cracks, craters and chemical substances (grease, oil). The overall drying has to be insofar as that no considerable shrinking has to be expected anymore.
- We generally recommend providing the subfloor with a dust-binding paint in order to guarantee a proper gluing of the pedestals. The subfloor has to be broom-cleaned or otherwise vacuumed.
- A 2C sealing has to be used with air-conducting floors. All rising building elements have to be sealed up to the upper edge of the floor (raised floor). Openings in the ceiling have to be closed permanently elastic and air-tight.
- The subfloor has to be sufficiently resistant to abrasion. Any floated up layers of fine mortar or loosely adherent parts must be removed before installation.
- The subfloors have to be sufficiently load-bearing and to be able to take up all occurring loads. The subfloor has to be within the levelness tolerances acc. to the DIN 18 202, table 3, line 2 (latest edition) or the properties are regulated by additional agreements.
- A tear-off test acc. to AGI a20 with glued pedestals has to be executed with uncertain adhesion properties of the subfloor (e.g. PVC covering, primer or screed) in order to determine the strength of the substrate. A minimum strength of 110 N is necessary. This is determined by pulling the glued raised floor pedestal off the subfloor.
- The room has to be checked on rectangularity in order to avoid small cut panels.
- Cut resp. cut-out panels are generally to be supported sufficiently with pedestals and/or profiles.
- The fixed heights in the different levels have to be checked before the installation (e.g. height level, elevators and staircase).
- Details for the execution of electrical outlets, bridging etc. have to be planned project-specific.
- The installer has the responsibility to safeguard his workplace in order to exclude accidents and damages.

⚠ WARNING

Missing or changed parts impair the function of the FLOOR and more® and can cause material resp. personal damage.

➲ Do not change or remove any attached parts.
➲ Mount all parts shown in this guideline resp. which are necessary.

4. Floor components

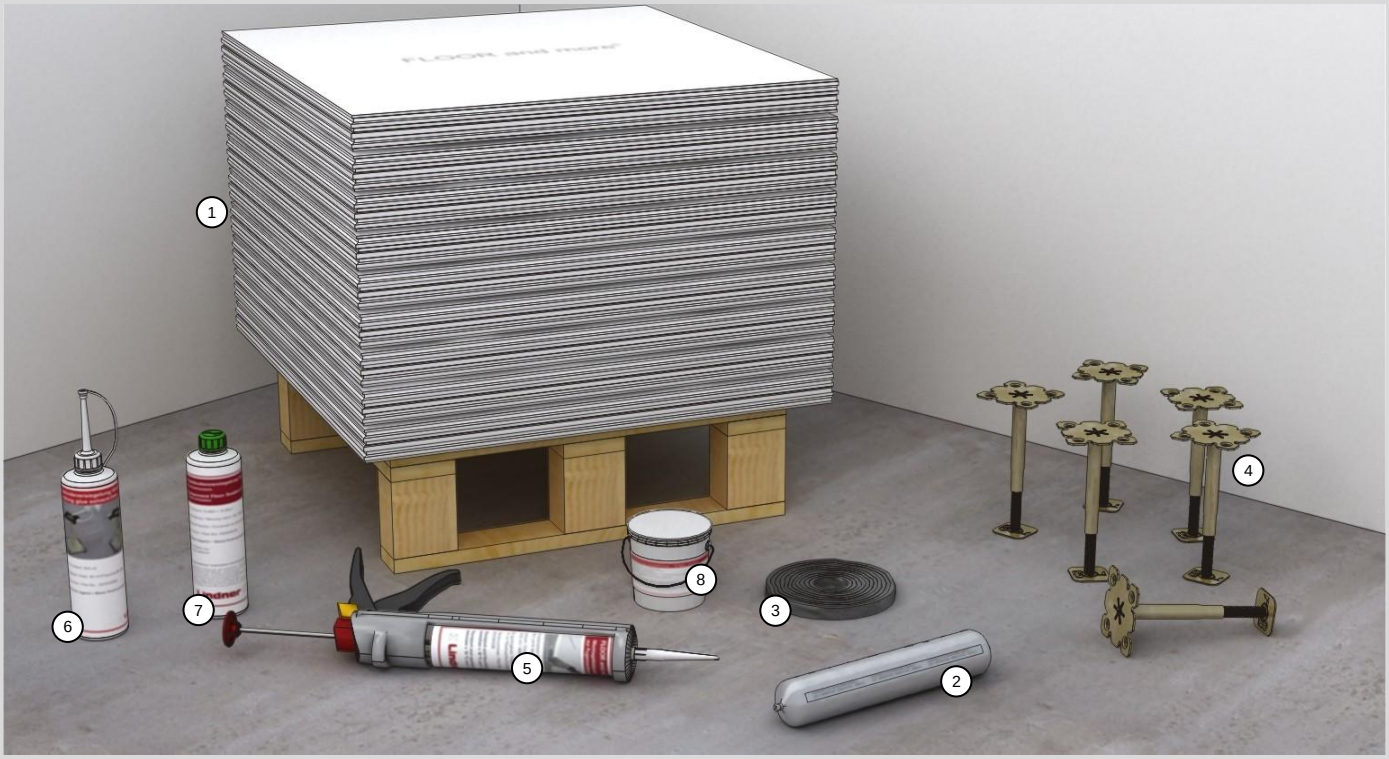

Figure 1 Components for the installation of FLOOR and more®

1. FLOOR and more® panels stacked on a wood pallet
2. Lindner Pedestal glue
3. Wall connection tape
4. Hollow floor pedestals
5. Lindner Installation glue FLOOR and more®
6. Lindner Locking glue solvent-free
7. Lindner Subfloor sealant 1C
8. Lindner Edge sealant solvent-free

4.1. Optional parts

These parts can be ordered optionally.

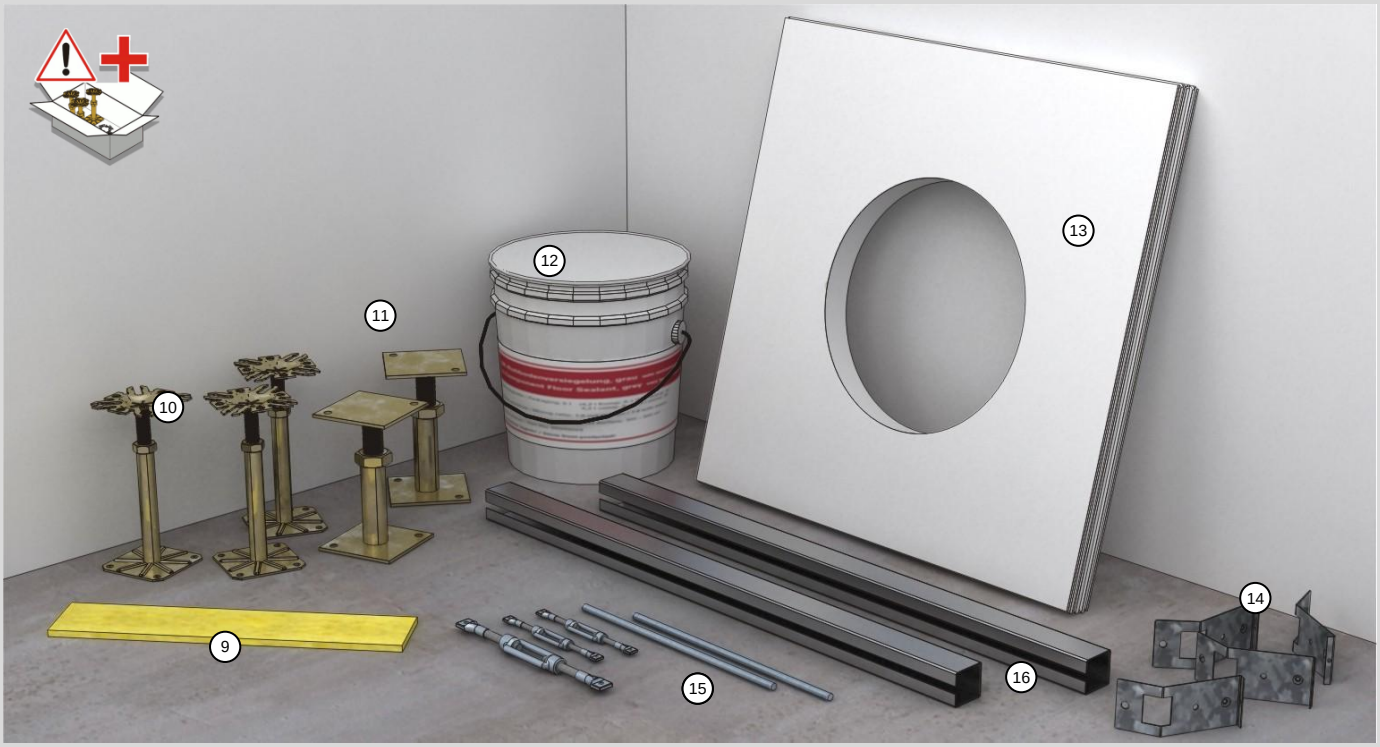

Figure 2 Optional parts

(9) Wall connection from mineral wool

(10) SW90 pedestal

(11) Pedestal type P (for FLOOR and more® power)

(12) Lindner Subfloor sealant 2C

(13) Panel with cut-out for inserts

(14) Pedestal cap RAS

(15) Bracing M6-M10 with threaded rod

(16) Bridging profile

5. Necessary tools for installation

Figure 3 Tools for installation

1. Rotating laser, optionally levelling device or hose levelling instrument (without illustration)
2. Vacuum cleaner
3. Band saw
4. Broom for cleaning of the subfloor
5. Raised floor water level
6. Caulking gun for 600 ml tube bags
7. Cartridge gun
8. Square
9. Vacuum suction lifter
10. Spike lifter
11. Folding metre stick
12. Pen for marking
13. Cutter
14. Plastic wedges
15. Brush

6. Floor installation

6.1. Cleaning and sealing of subfloor

Figure 4 Cleaning of the subfloor

Figure 5 Application of the subfloor sealing

Work steps:

A 6.1.1 The subfloor has to be cleaned by sweeping and vacuuming before the installation.

A 6.1.2 Apply the subfloor sealing if necessary (processing acc. to information of the respective manufacturer of the sealant). See also indications below.

Indications

- The subfloor has to be dry, level, solid as well as free of cracks, crates or chemical substances (grease, oil). The overall drying has to be insofar as that no considerable shrinking has to be expected anymore.
- The subfloor has to be sufficiently resistant to abrasion. Any floated up layers of fine mortar or loosely adherent parts must be removed before installation.
- We recommend sealing the subfloor with a 2-component sealing or a similar material with air-conducting floor systems. Please see the respective documents of the manufacturer for information on the processing.

6.2. Fixing and checking of height reference points

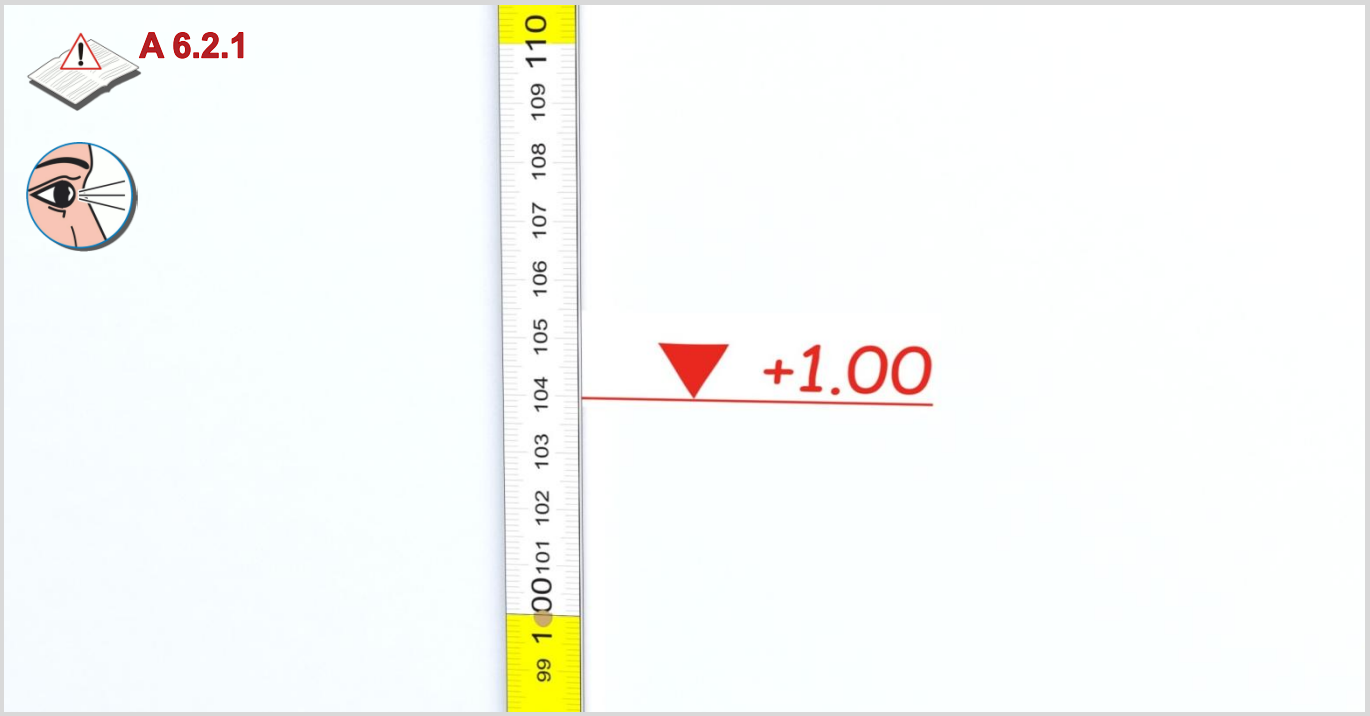

Figure 6 Height reference points

Work step:

A 6.2.1 Fix height reference points (e.g. height level, elevators or staircase).

6.3. Adjustment of the first pedestal

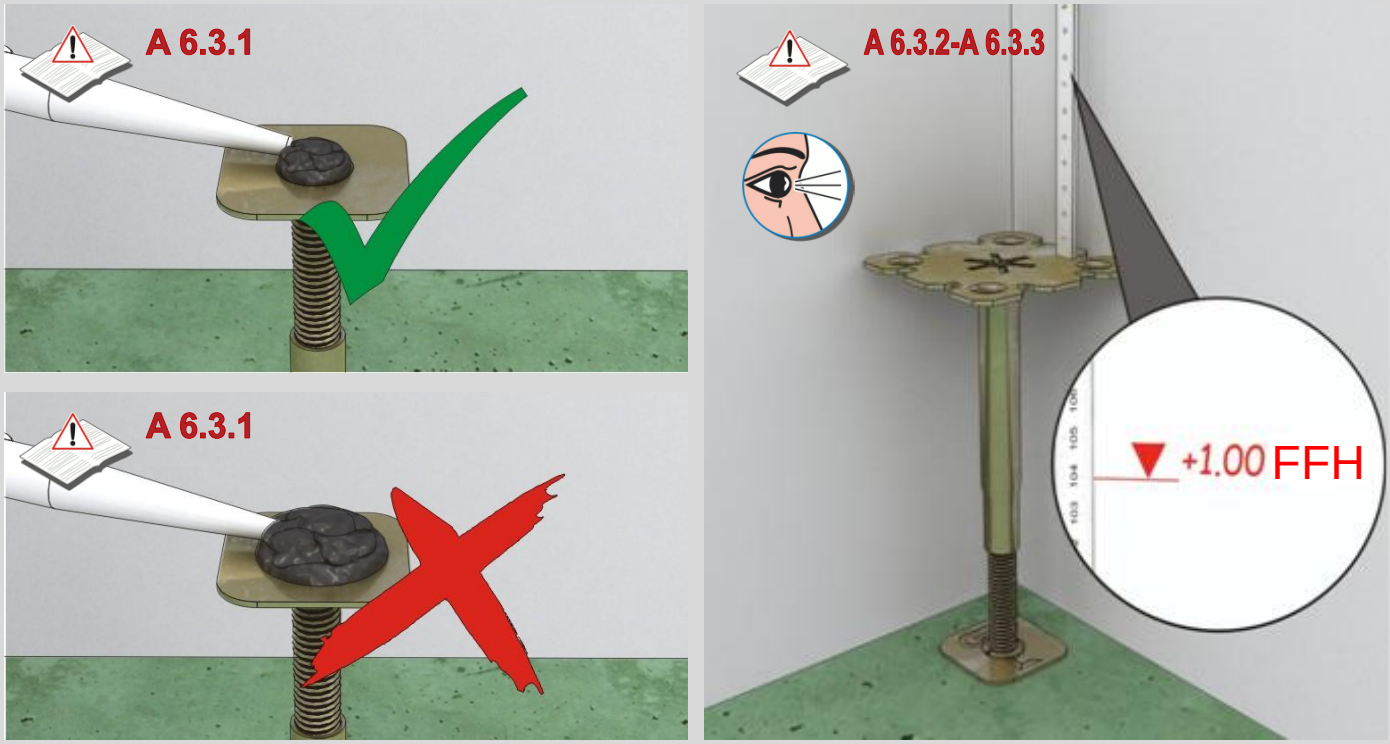

Figure 7 Installation / adjustment of the first pedestal

Work steps:

A 6.3.1 Apply pedestal glue to the lower side of the first pedestal (approx. size of a walnut). Please see the documentation of the respective manufacturer for information on the processing of the pedestal glue.

A 6.3.2 Turn around the pedestal, place it at reference point and press it down. Level pedestal to the required height with a levelling instrument (hose levelling instrument, levelling device, laser or similar).

Attention: Consider the thickness of the panel!

A 6.3.3 Let the glued pedestals start to dry if possible.

Indications

- The installation of the substructure has to be done corresponding to the valid installation plan.
- The installation of the floor system should only be executed by instructed professional staff.
- In terms of the admissible loads, it has to be paid attention that the grid dimension of the pedestals (different acc. to system) is not exceeded!
- The pedestal may not touch the wall.

6.4. Securing of pedestals against height displacement

Figure 8 Threaded bolt screwed into the tube

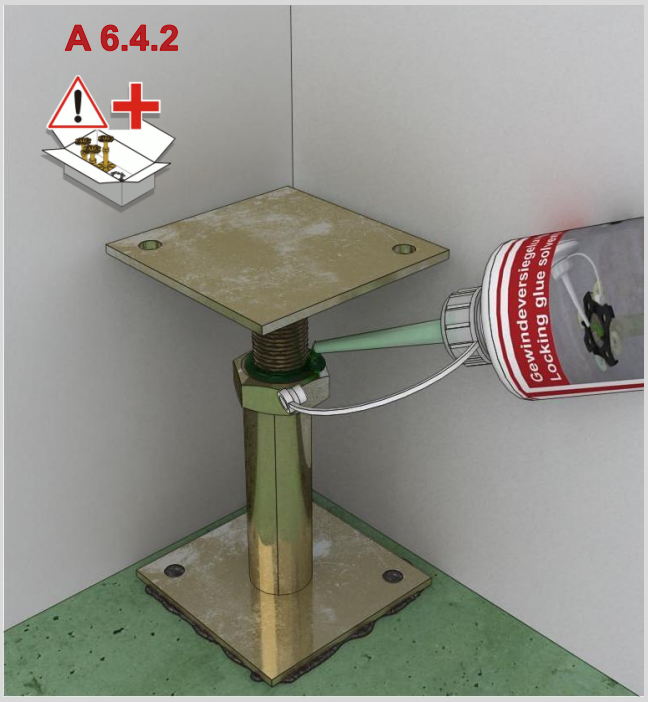

Figure 9 Pedestal with adjustment nut

Work steps:

All pedestals have to be secured against height displacement after the exact adjustment.

A 6.4.1 Variant 1 if threaded bolt is screwed into the tube.
Pour locking glue into the pedestal head from above.
See figure 8.

A 6.4.2 Variant 2 with adjustment nut
Apply locking glue on the nut on the side of the thread.
See figure 9.

See the current data and safety data sheet for the information on the processing of the locking glue.

6.5. Special cases / measures

The work steps presented in this chapter have to be applied acc. to the situation on the building site resp. static requirements. They are not part of the general installation.

6.5.1. *Compensation of unevenness of the subfloor*

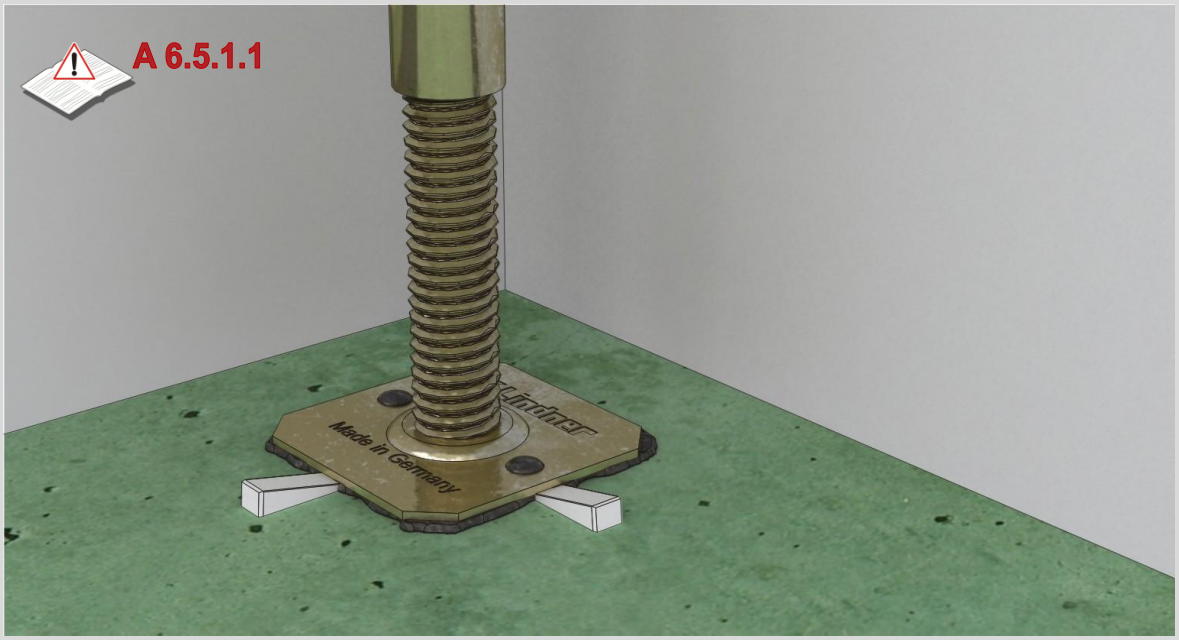

Figure 10 Compensation of unevenness of the subfloor.

Work step:

A 6.5.1.1 Compensate large unevenness by means of wedges.

6.6. Pedestals for the first FLOOR and more® panel

Figure 11 Installation of the further pedestals for the first raised floor panel

Work step:

A 6.5.1 Install the further pedestals with the required grid dimension and level the pedestals on height.

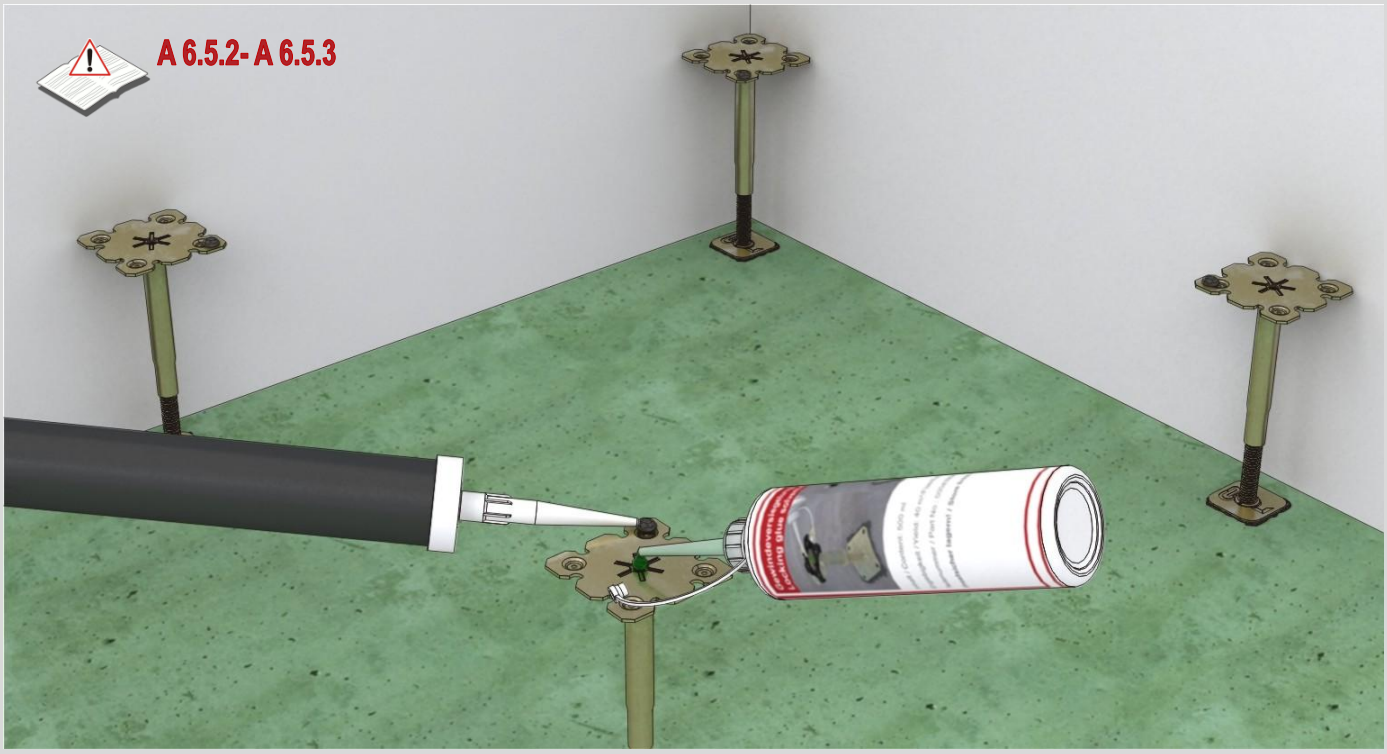

Figure 12 Sealing of pedestals / application of pedestal glue to the head plate

Work steps:

A 6.5.2 Securing of the pedestals against displacement with locking glue as described in work step 6.4.

A 6.5.3 Application of a small quantity of pedestal glue (peanut size) to the corner area of the pedestal head.

6.7. Wall connection

6.7.1. Cutting-off of tongue and grooving

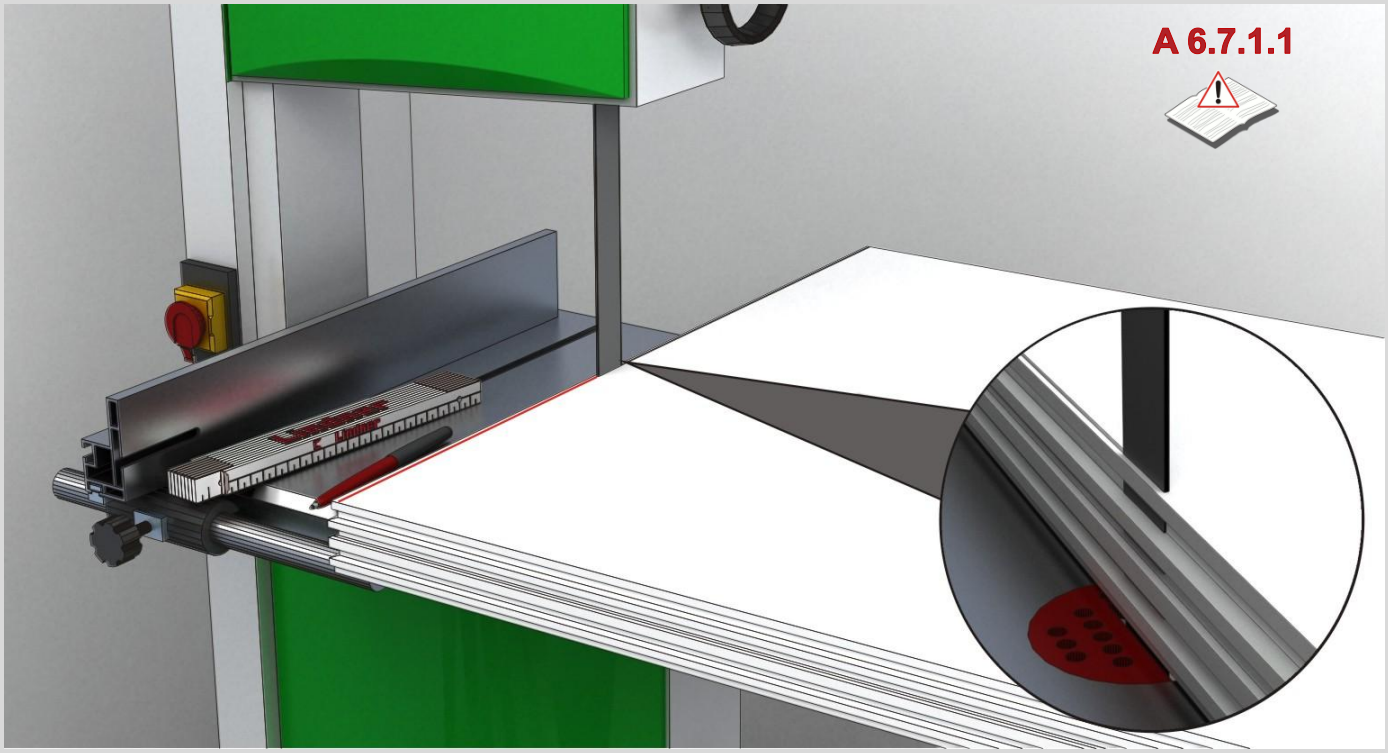

Figure 13 Cutting-off of tongue and grooving

Work step:

A 6.7.1.1 The tongue and grooving has to be cut-off flush at panel edges which are connecting to a wall.

⚠ WARNING

Danger of severe incised wounds.

➲ Machines may only be operated by qualified personnel. The valid accident prevention regulations have to be kept.

6.7.2. Sealing of cut edges

Figure 14 Sealing of cut edges

Work step:

A 6.7.2.1 Apply Lindner edge sealant with a brush and let it dry.
The drying time amounts to 5 – 15 min. depending on the room climate.

6.7.3. Application of the wall connection tape

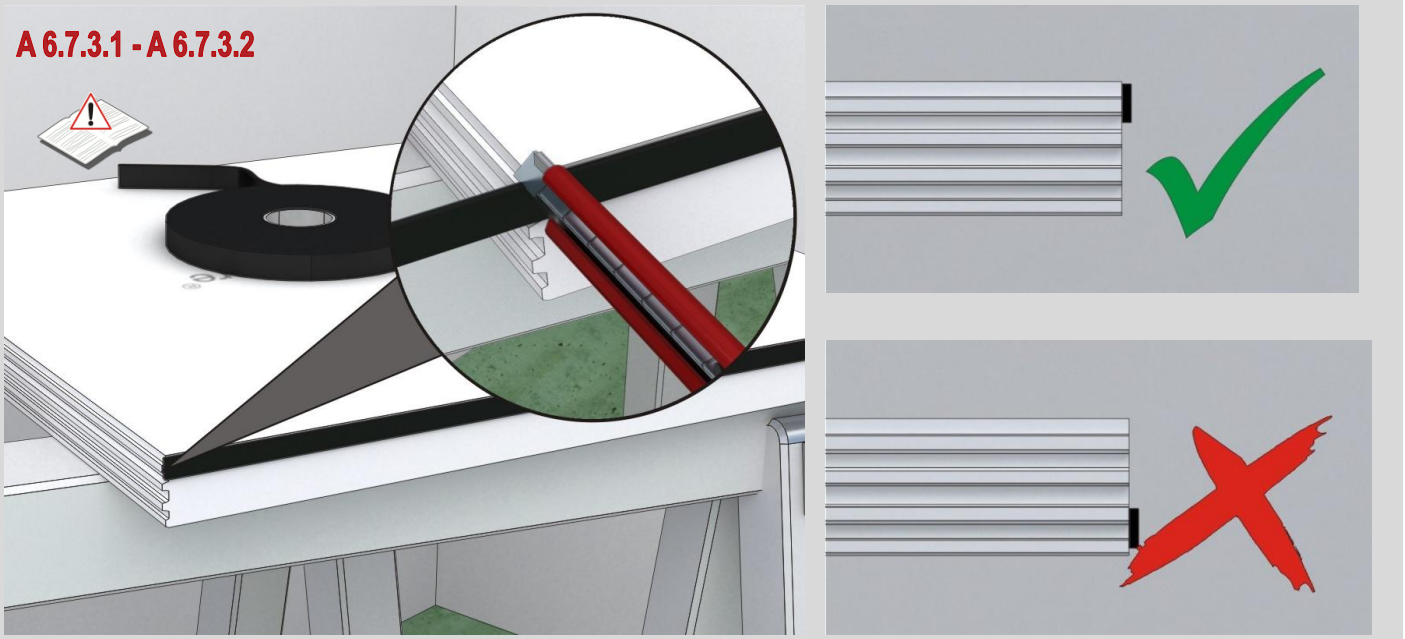

Figure 15 Application of the wall connection tape

Work steps:

A 6.7.3.1 Unroll wall connection from the roll and attach it with the adhesive side flush to upper edge of the panel (on 2 sides with the corner panels).

A 6.7.3.2 Cut the wall connection tape properly to edge length of the panel.

Indication
• A wall connection tape has to be attached to panel edges with connection to a wall.

⚠ WARNING
Inappropriate use of a cutter can cause incised wounds resp. severe injury. ➲ Always cut away from the body.

6.8. Installation of the first FLOOR and more® panel

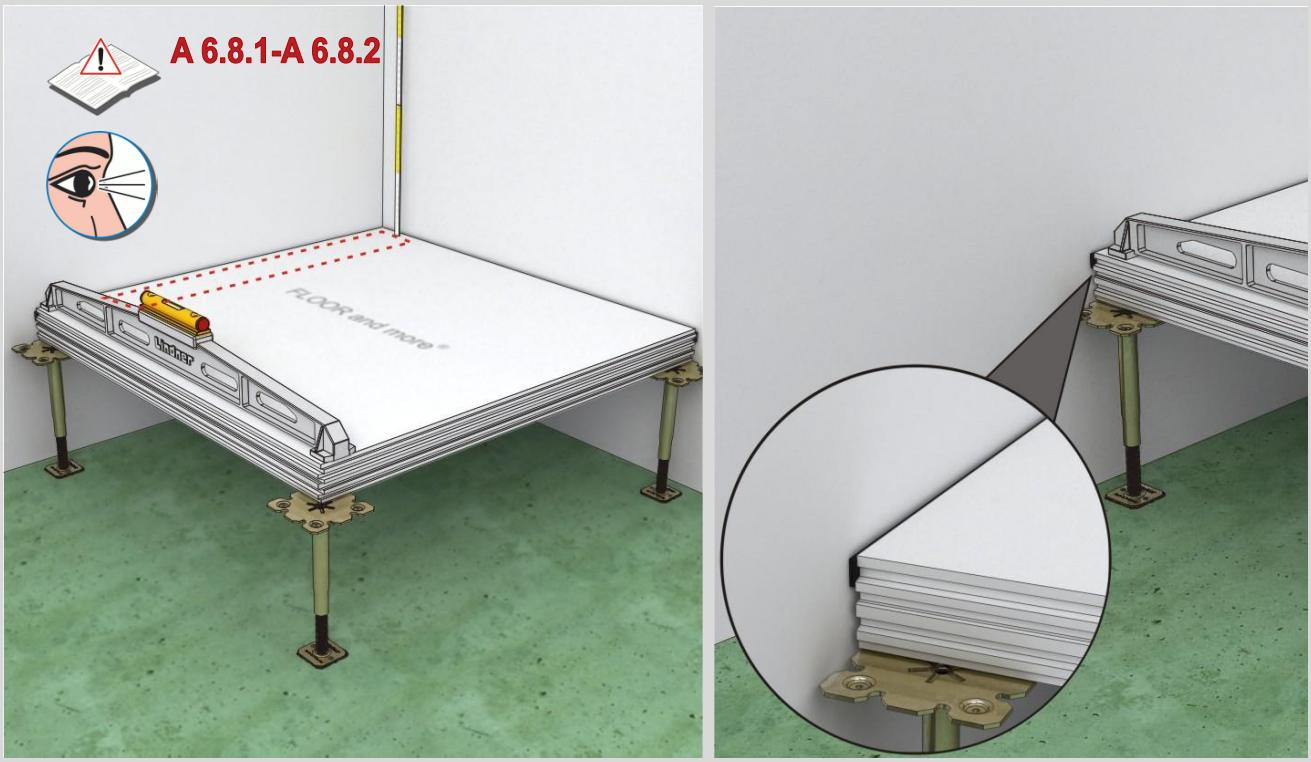

Figure 16 Placing of first FLOOR and more® panel on the pedestals

Work steps:

A 6.8.1 Place the panel on the installed hollow floor pedestals.

A 6.8.2 Check panel with raised floor water level in both directions and adjust the pedestals if necessary.

Indication
• FLOOR and more® logo on the upper side of the panel sets the installation direction.

6.9. Panel gluing

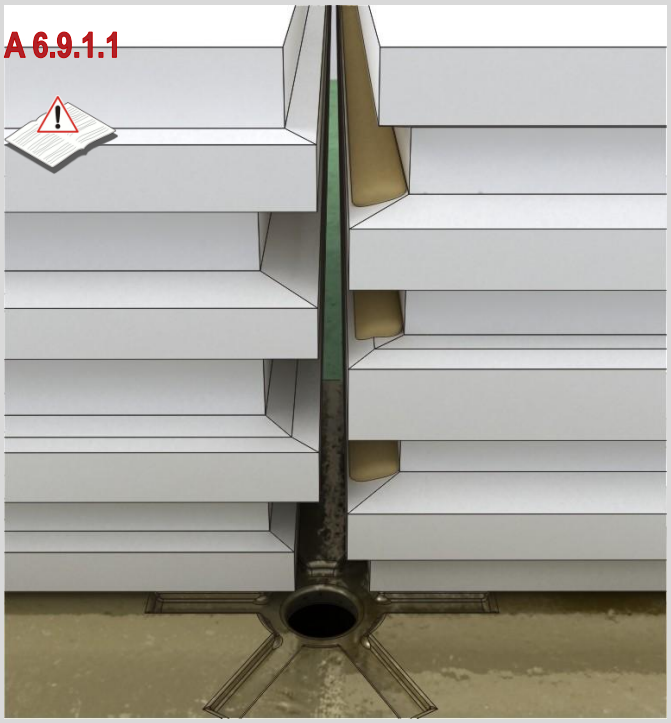

Figure 17 Glue application with triple tongue and grooving

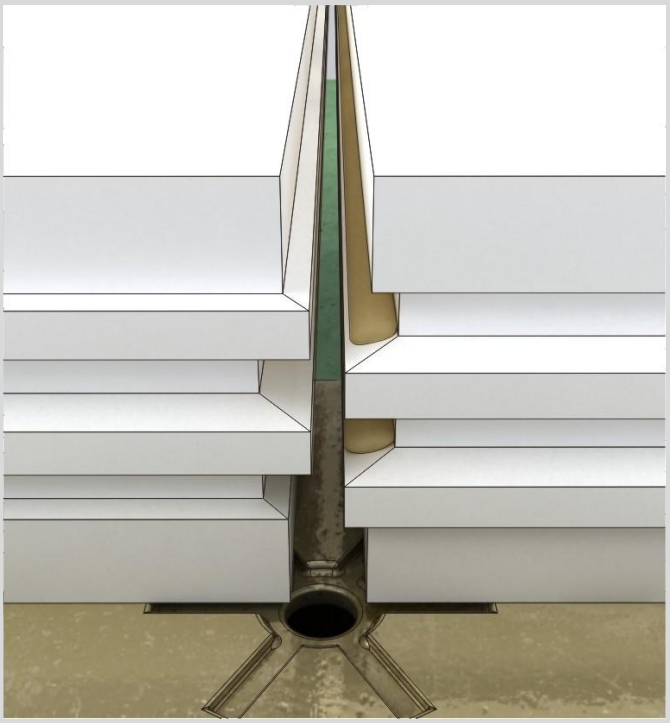

Figure 18 Glue application with double tongue and grooving

Work step:

A 6.9.1.1 Apply Lindner FLOOR and more® Installation glue to each full tooth. Thereby the glue needs to be applied to the front area of the tooth. Do not apply the glue into the groove.

The glue line needs to be applied on the full length of the panel.

Remove leaked glue after the assembly of the panels.

ATTENTION

Inappropriate gluing
Use of non-approved resp. not recommended adhesives

➲ The static properties of the floor system cannot be guaranteed anymore.

Indication

- After the assembly of the panels, they should be pulled apart once again in order to check the holohedral wetting of the joint.
- FLOOR and more® is equipped with a triple tongue and grooving from a thickness of 40 mm.

6.10. Gluing of the panel to the pedestal head

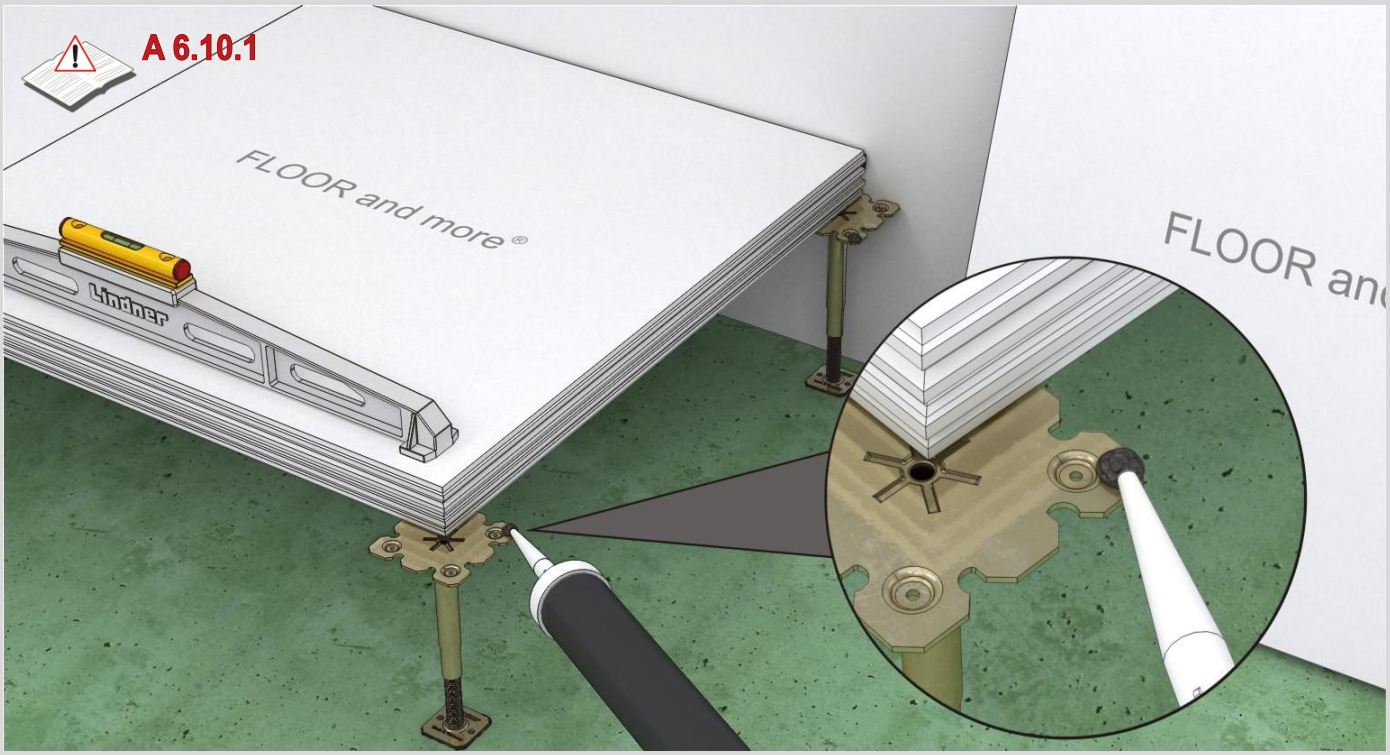

Figure 19 Installation of the first row of panels

Work step:

A 6.10.1 Apply a small quantity of pedestal glue (peanut size) to the corner area of the head plate. It has to be paid attention that no pedestal gets into resp. to the tongue and grooving.

ATTENTION

Pedestal glue in / at the tongue and grooving

➲ The panels cannot be pushed exactly together.

6.11. Installation of further panels

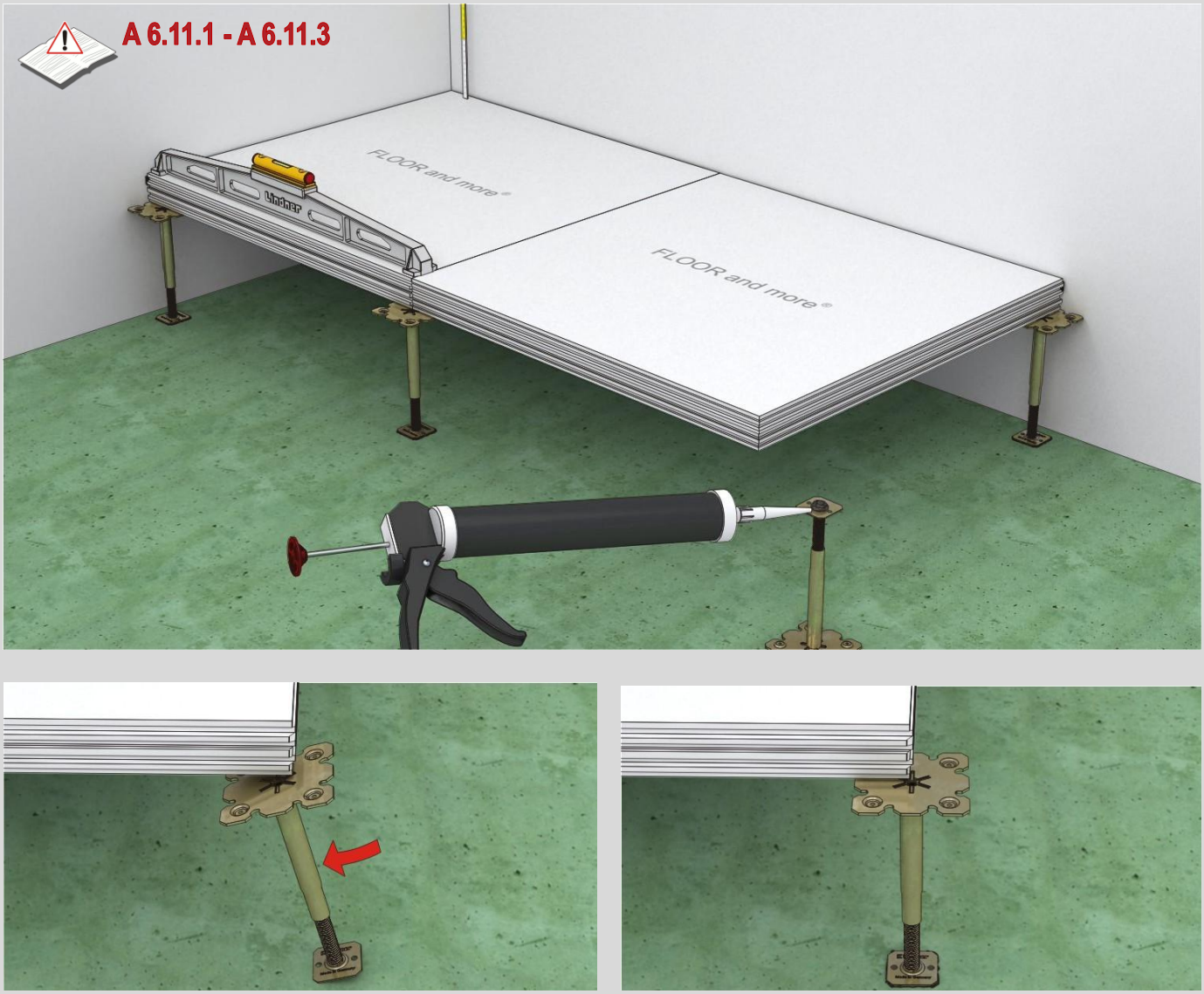

Figure 20 Placing of pedestal under installed panel

Work steps:

A 6.11.1 Adjust pedestals to the clear height of the FLOOR and more® without glue.

A 6.11.2 Apply pedestal glue to the foot plate as described in work step A 6.3.1 and to the head plate as described in work step A 10.1.

A 6.11.3 Placing of the pedestal as shown in figure 20.

A 6.11.4 Readjust pedestals if necessary. Turn the adjustment nut with pedestals with adjustment nut and turn the lower part with pedestals with threaded tube.

6.12. Measuring of cut panels

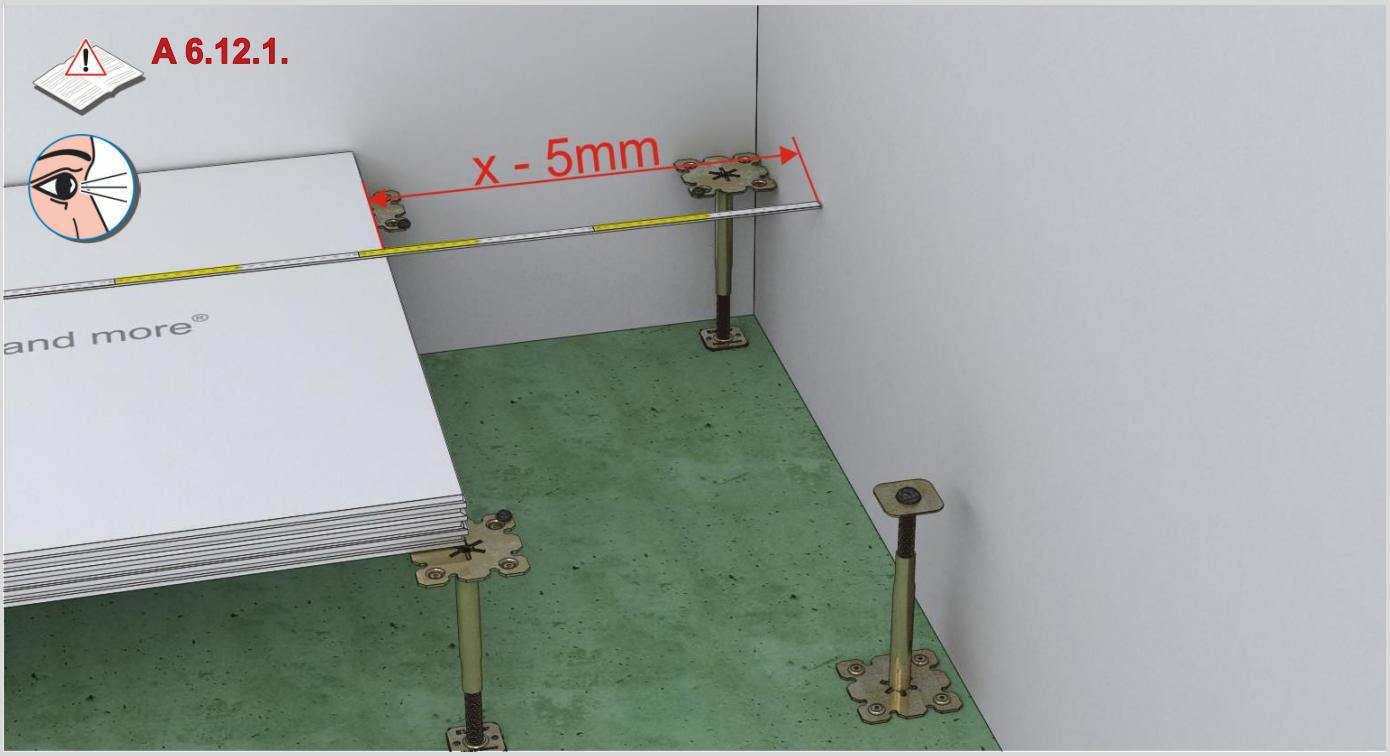

Figure 21 Determining of cut panels

Work step:

A 6.12.1. Measure the size of the cut panels in order to determine the respectively required panel format. Cut the panel 5 mm smaller than measured to form a peripheral joint.

ATTENTION

Consider the system specification in the peripheral area!

➲ The load class is not valid with non-compliance.

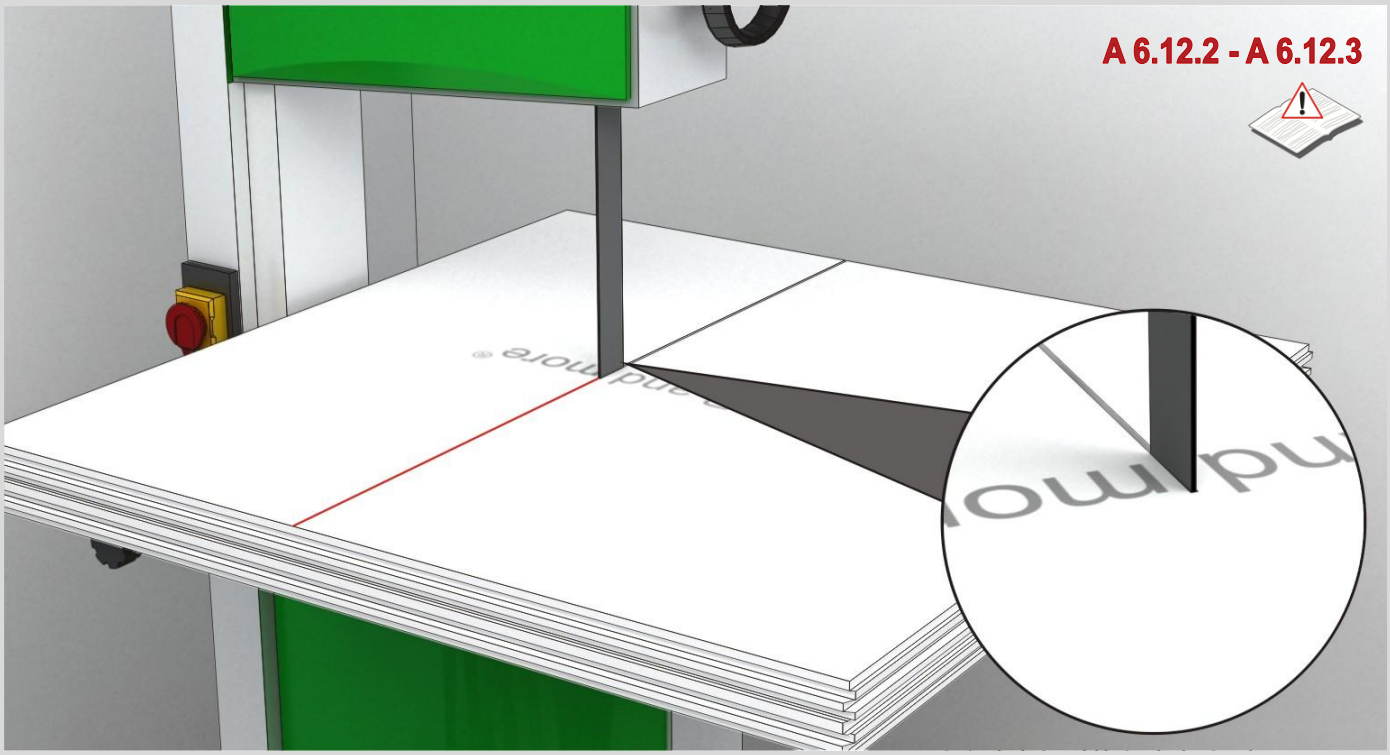

Figure 22: Preparing of cut panels

Work steps:

A 6.12.2. Marking of the required panel size and line of cut.

A 6.12.3 Cut along the line of cut with a band saw.

⚠ WARNING

Danger of severe incised wounds.

➲ Machines may only be operated by qualified personnel. The valid accident prevention regulations have to be kept.

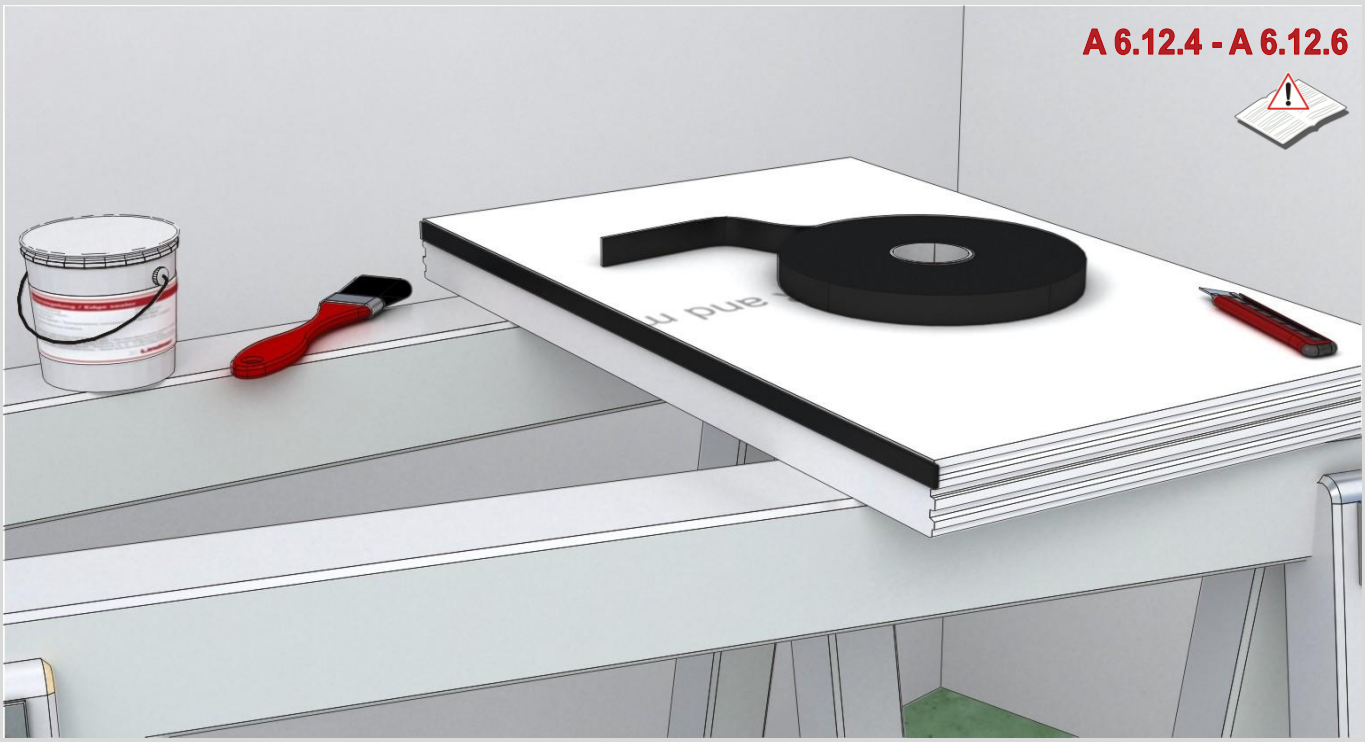

Figure 23: Sealing of cut edge

Work steps:

A 6.12.4 Apply Lindner edge sealant with a brush acc. to the technical data sheet and let it dry on the surface.

A 6.12.5 Unroll the wall connection tape and glue it with the adhesive side flush to the upper edge of the panel (on two sides with corner panels).

A 6.12.6 Cut the wall connection tape to the edge length of the panel.

⚠ WARNING

Inappropriate use of a cutter can cause incised wounds resp. severe injury.

➲ Always cut away from the body.

6.13. Installation of perimeter pedestals

Figure 24 Installation of perimeter pedestals

Work steps:

A 6.13.1 Installation of perimeter pedestals acc. to work steps 6.3 to 6.5.

A 6.13.2 Preparation of the perimeter panel acc. to work step 6.7.

6.14. Insertion of cut panel

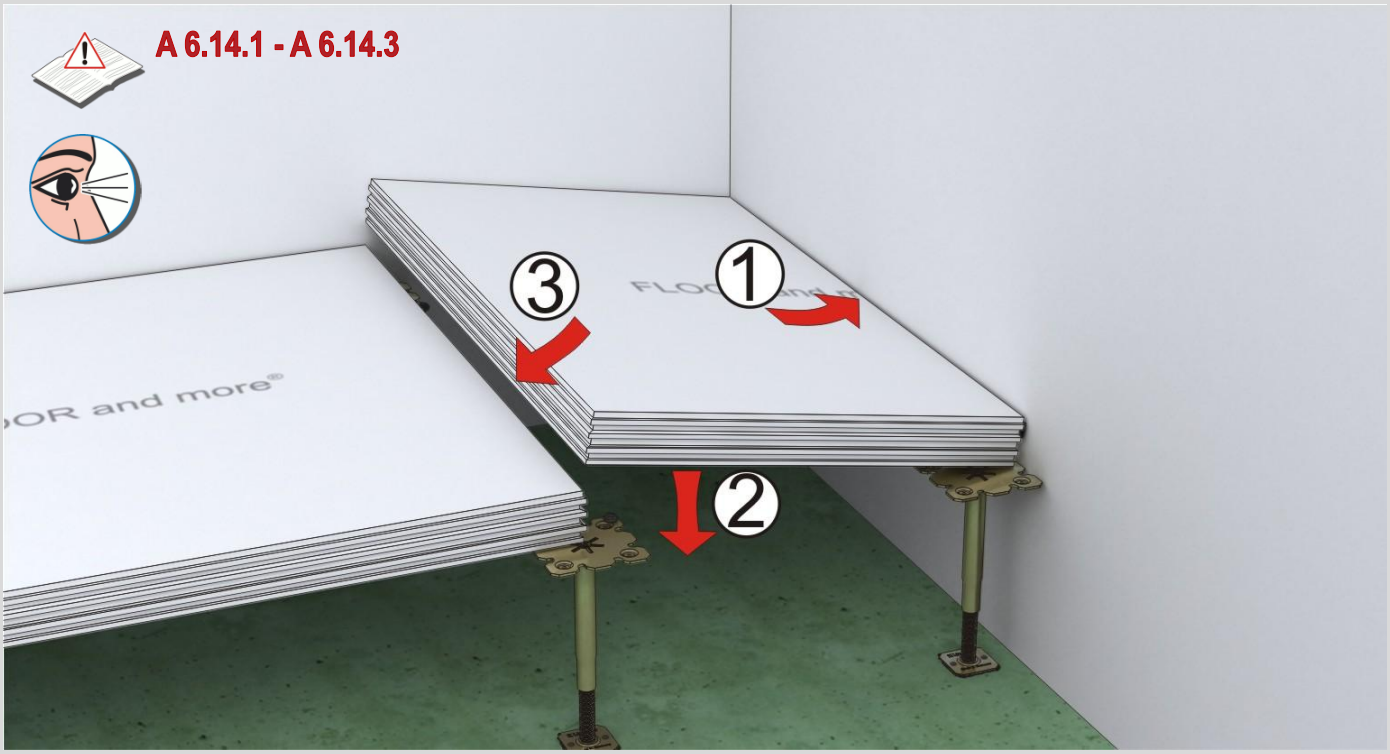

Figure 25 Insertion of cut panel

Work steps:

A 6.14.1 Secure pedestal against displacement as described in work step 6.11.

A 6.14.2 Apply pedestal glue to the pedestal head as described in work step 6.10.

A 6.14.3 Apply FLOOR and more® installation glue to the panel as described in work step 6.9.

A 6.14.4 Insert panel as shown on figure 25.

6.15. Checking of the first row of panels

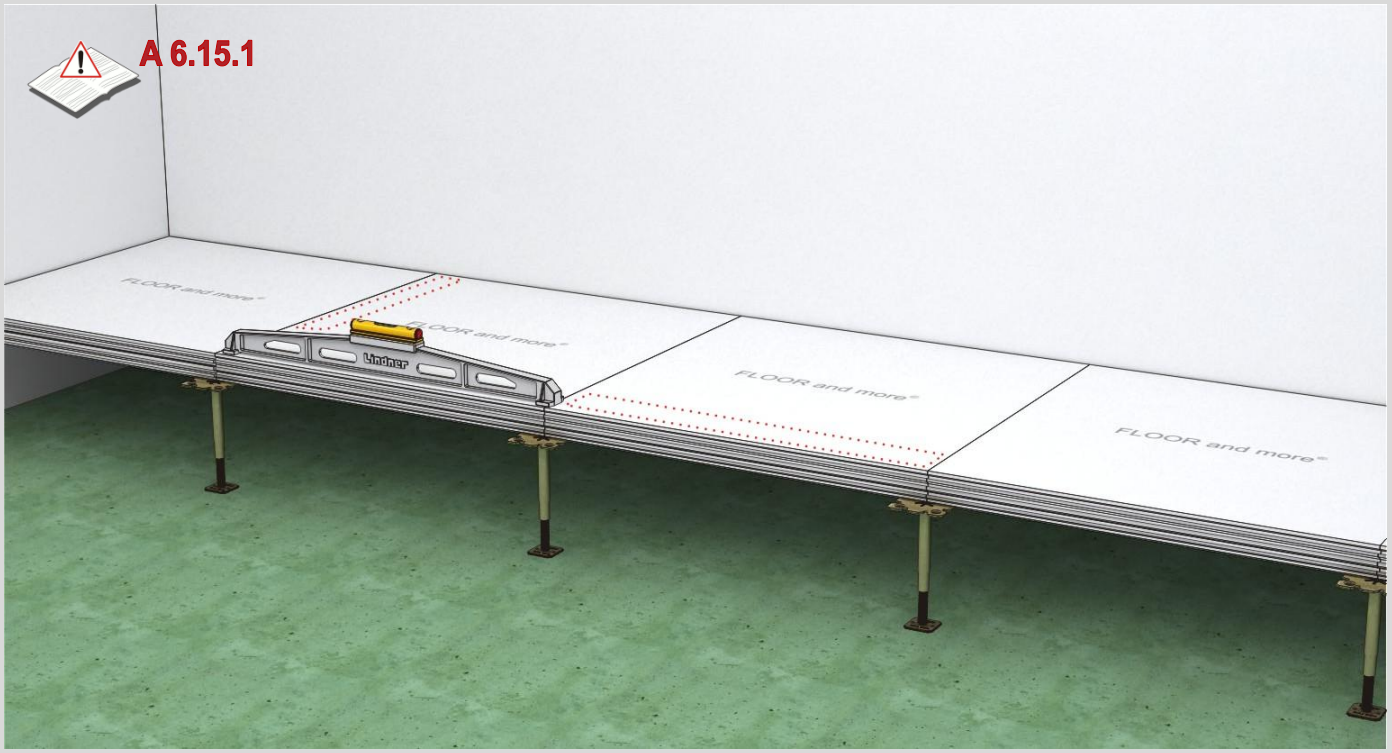

Figure 26 Checking of the first row of panels

Work step:

A 6.15.1 Perform continuous checks as described in work step 6.10 and 6.16.

Indications
• **Important:** Please pay attention to the exact accuracy and levelling of the first row of panels as the further installation is based on it! • The row of panels can be installed with wedges in order to make the installation easier. The wall connection tape needs to be left out in the areas where wedges are used.

6.16. Drying of first row of panels

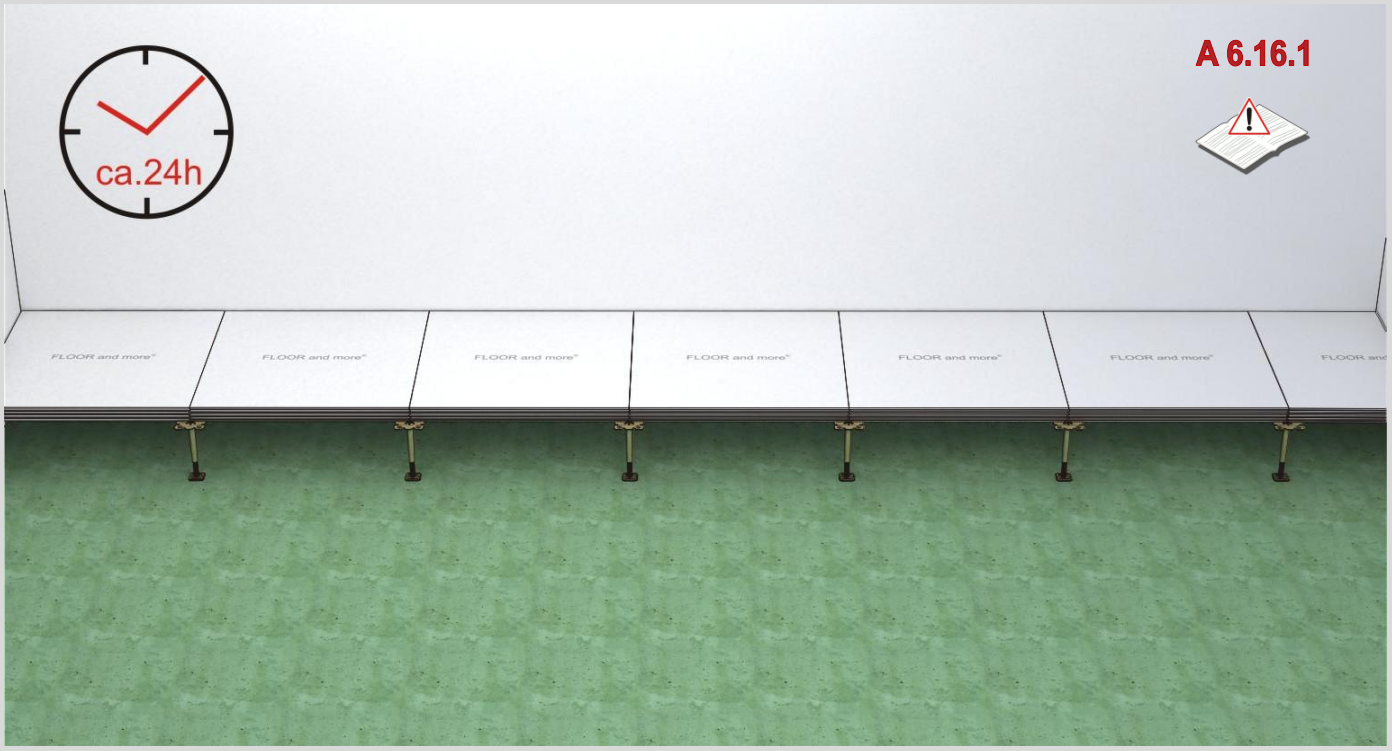

Figure 27

Work step:

A 6.16.1 If possible, let the first row of panels dry.

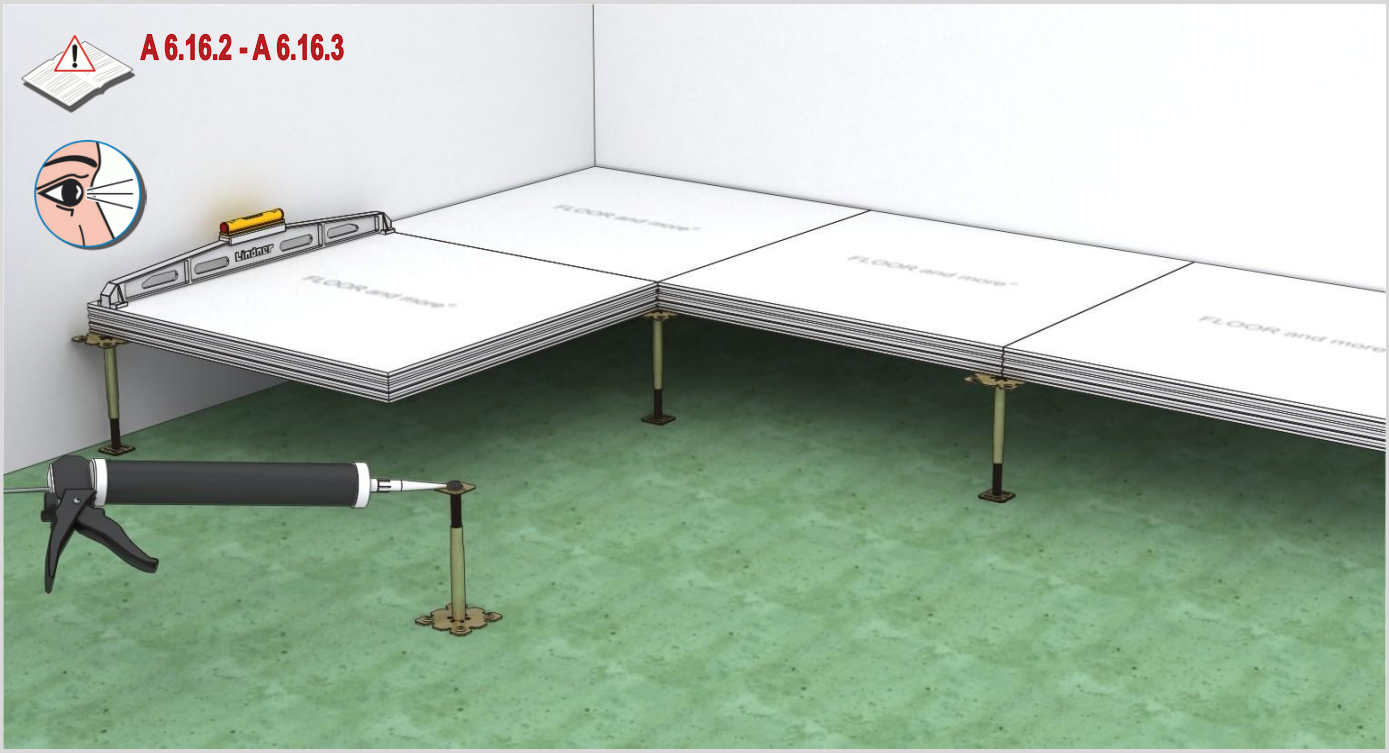

Figure 28 Installation of the second row of panels

Work step:

A 6.16.2 Install the first panels of the second row of panels as described in work step 6.8.

A 6.16.3 Install fourth pedestal as described in work step 6.10. Do **not** lift the panels with the insertion of the pedestal!

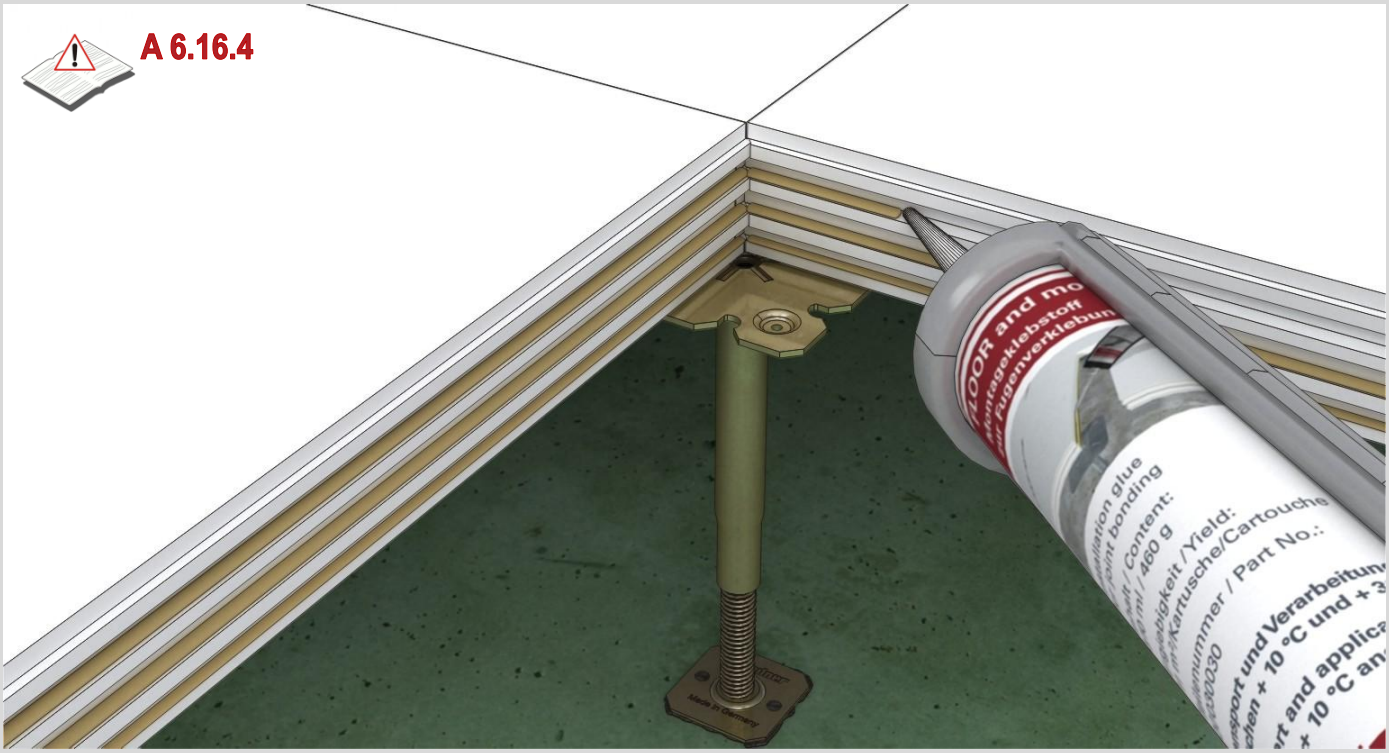

Figure 29 Glue application for the laying of further panels

Work step:

A 6.16.4 Glue further panels as described in work step 6.9.

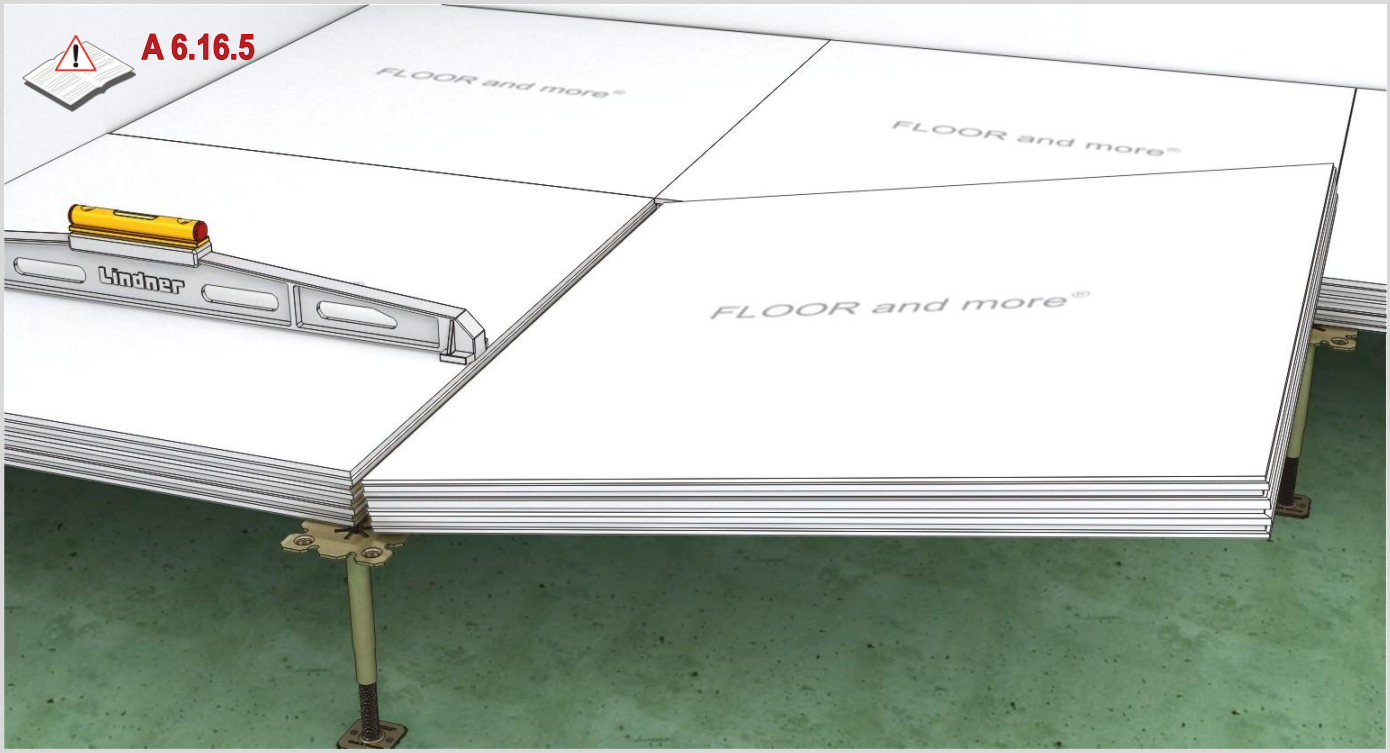

Figure 30 Installation of the second row of panels

Work step:

A 6.16.5 Install and control the second row of panels as described in work steps 6.3 to 6.13.

6.17. Check shift of grid and height tolerances

The in this chapter mentioned work step needs to be done during the complete installation.

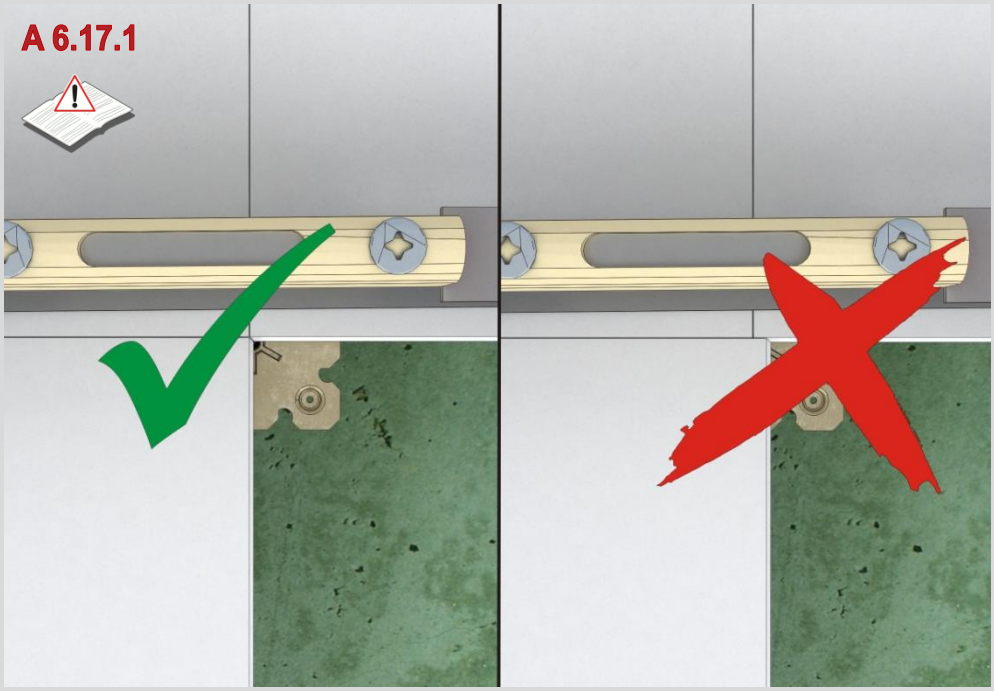

Figure 31 Check shift of grid resp. height tolerances

Work step:

A 6.17.1 Check shift of grid and correct it if necessary in order that there exists no shift of grid.

6.18. Revision opening

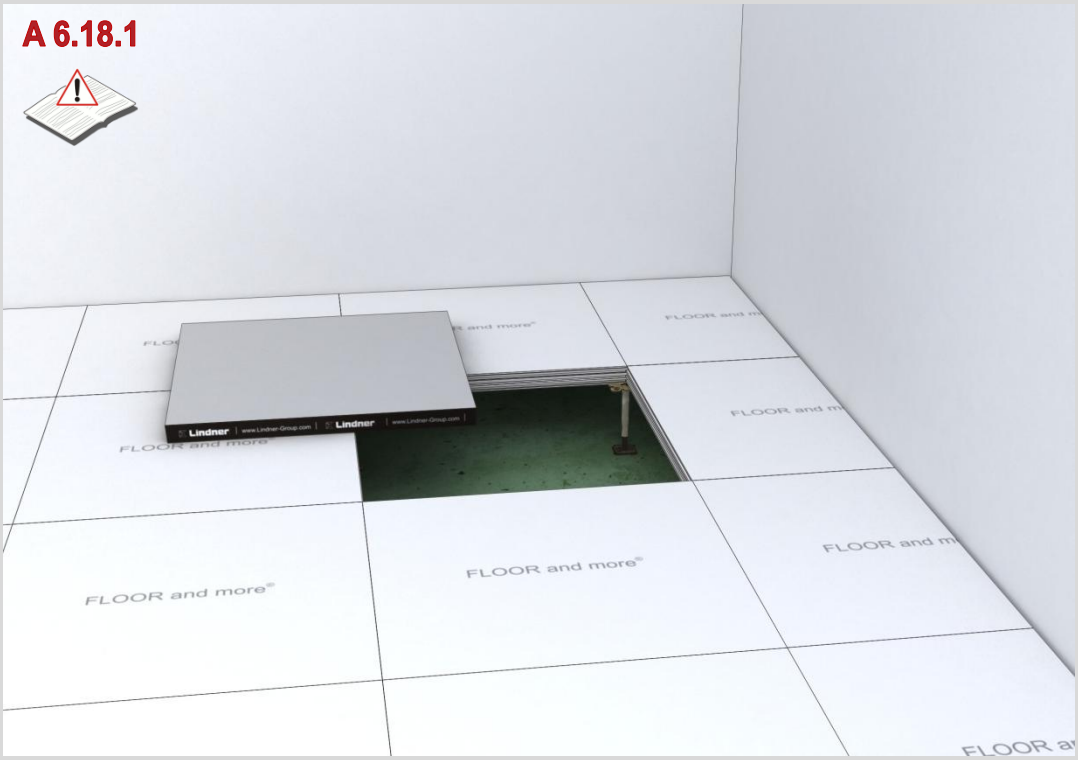

Figure 32 Installation of a revision opening

Work step:

A 6.18.1 Create an opening for placing a raised floor panel during installation or by later cutting.

Indication
• Acc. to the covering type, each revision opening can be optionally made with an aluminium frame and a covering separation rail.

6.19. Installations

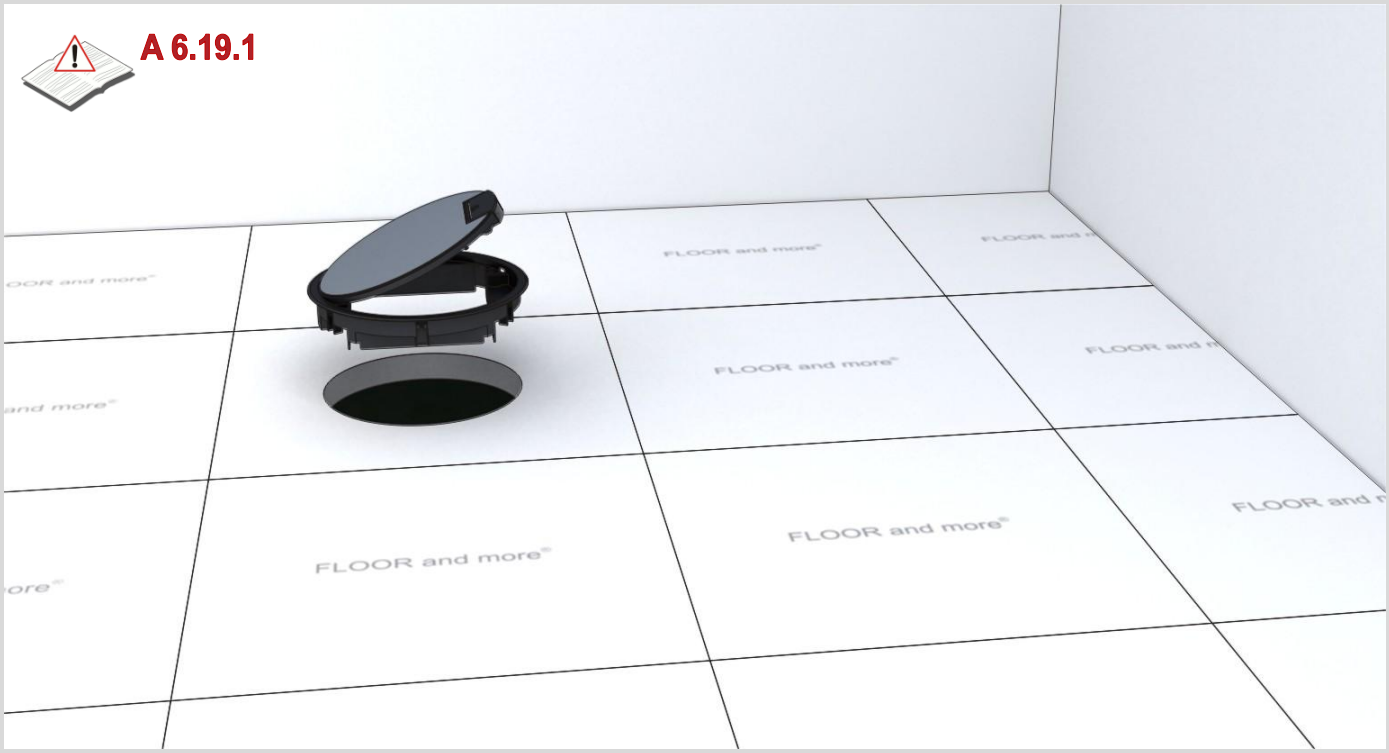

Figure 22 Installation of electrical outlets

Work step:

A 6.19.1 Insertion and fixing acc. to information of the manufacturer of electrical outlet for taking up data and electric connections into factory-made or on site cut openings.

6.20. Forming of a joint

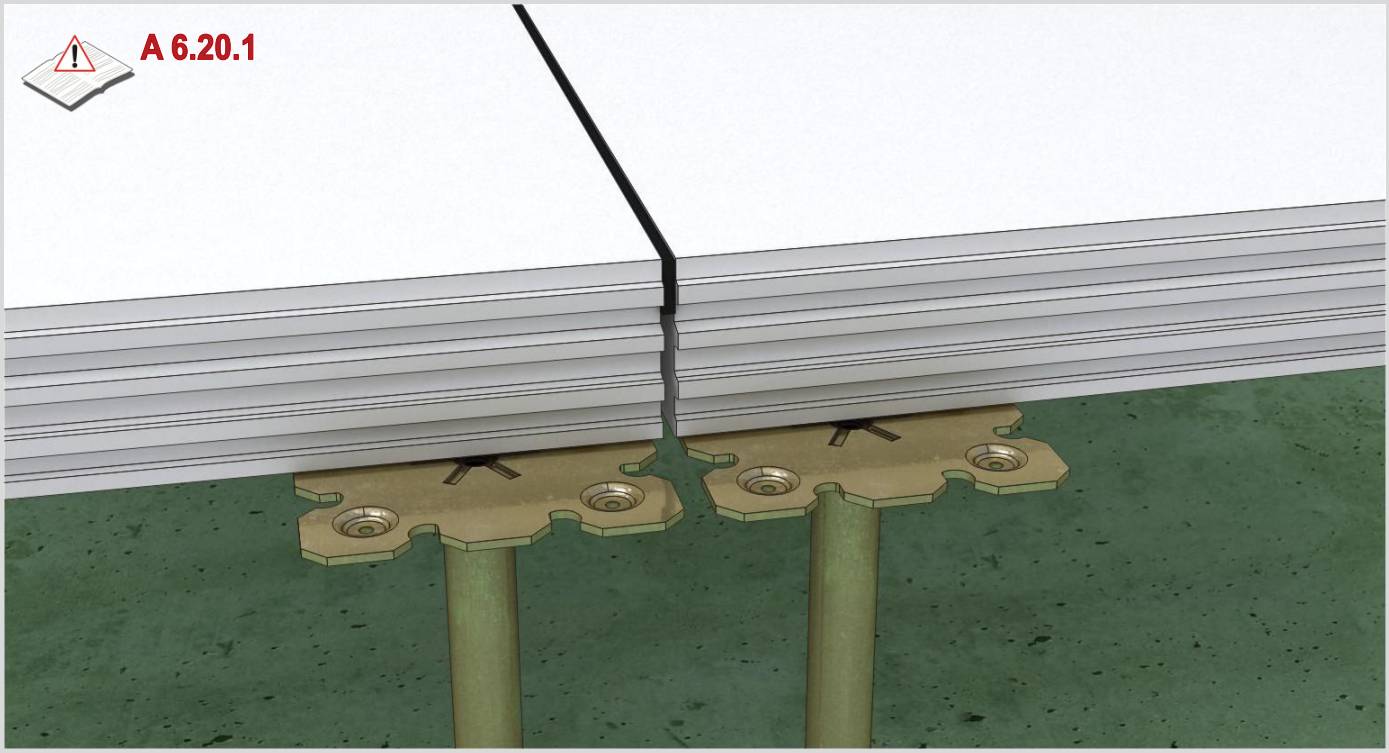

Figure 22 Creating a joint

Work steps:

A 6.20.1 Cut-off the tongue and grooving flush at both panels as in work step 6.7.1.

A 6.20.2 Apply a wall connection tape to one panel as in work steps 6.7.2 and 6.7.3.

6.21. Bracings and further accessories

Indication

- There are no installation steps for the bracing of the FLOOR and more® area included in the installation guideline. These are necessary in order to take up the horizontal loads which are affecting the floor system. Those have to be planned and installed specifically for each project.
- Furthermore there are no work steps for further accessories included.
- Please do not hesitate to contact us if you have further questions or if you need help.

6.22. Disposal

Please take care of an environmentally compliant disposal acc. to local regulations of the packaging, adhesives, sealants and accrued waste with installation!

Please search for possibilities of recycling or appropriate disposal.

We can do it all for you.

Lindner Concepts:

- Insulation Engineering and Industrial Service
- Clean Rooms and Laboratories
- Airports and Airlines
- Railways and Tunnels
- Studios and Concert Halls
- Interior Fit-out and Furnishings
- Cruise Liner and Ship Fit-out
- Hotels and Resorts
- General Contracting

Lindner Products:

- Facades
- Ceiling Systems
- Lights and Lighting Systems
- Partition Systems
- Doors
- Floor Systems
- Heating and Cooling Technologies
- Dry Lining Systems

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- Green Building
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- Delivery
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- Installation
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Lindner

Bahnhofstrasse 29
94424 Arnstorf
Germany
Phone +49 (0)8723/20-36 82
Fax +49 (0)8723/20-28 30
floorsystems@
Lindner-Group.com
www.Lindner-Group.com