Products

Installation guideline MR_SB_06_SWITCH ROOM FLOOR

Lindner AG **Raised access floor – Switch room floor**



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2. Explanations to this guideline

Dear customer

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

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 details and information on the installation of our raised floor system are included.

Please also pay attention to all safety and warning notices.

For reasons of clarity, we weren't able to show all detail information to every step of the installation.

Texts and drawings published in this document are exemplary. Warranty for completeness and therefore complaints are excluded. Please don't hesitate to contact us if you have further questions or if you are in need of help.

The installation by trained and professional installation staff is mandatory.

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. We are pleased to assist you, if you have questions to the possibilities of application and use of our floor.



2.1. Used warning notices

	Marks a danger which can immediately lead to an injury .
Type of danger and its sources	
Consequences	
 Measures of prevention. 	

ATTENTION	Marks a danger which can cause damage or destruction of the
Type of danger and its sources	product
Consequences	
 Measures of prevention. 	

2.2. Symbols



3. General indications/installation requirements

Indication
Please read the following instructions thoroughly before installation!
The installation of the switch room floor 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 drawn.
Depending on raised floor type and covering, adequate expansion joints have to be planned and maintained strictly

- The delivered material has to be checked on quantity, identity, quality and completeness. Complaints on material in installed condition cannot be accepted. Damage has to be reported immediately in order to maintain claims.
- The materials have to be stored in dry, air-conditioned rooms (20 ± 5 °C, 40 to 65 % relative air humidity). Do not store outside, protect from humidity.
- In order to avoid a deformation of the panels and the switch room floor, they have to be stored on a level surface.
- The material should be acclimated at least 48 h inside the premises of installation before installing.
- Whilst de-piling the delivered pallet, make sure only to put the panels top side on top side and bottom side on bottom side to avoid rubbing off the batch labelling onto the top side of the panel.

ATTENTION

The admissible climate during the installation is $20 \pm 5^{\circ}$ C and the admissible relative air humidity is 40 to 65 %.

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- The installation may only be started when the admissible climate for the installation (according to DIN 12 825) is reached and the facade has been 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 so far advanced, that no further, considerable shrinkage is to be expected.
- We generally recommend providing the subfloor with a dust-binding paint in order to guarantee a proper gluing of the pedestals. The only exceptions are bulkhead systems (firewalls); they must not be treated with dust-binding paint. Before the treatment with paint, the subfloor has to be vacuumed.
- 2C sealing has to be used with air-conducting floors. All rising building elements have to be sealed up to the top edge of the floor (raised floor). Ceiling-breaches 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 have to be removed before installation.
- The subfloors have to be sufficiently load-bearing and also able to absorb all occurring loads. The subfloor has to be within the levelness tolerances according to the DIN 18 202, table 3, line 2 (latest edition) or the properties are regulated by additional agreements.
- A tear-off test with glued pedestals, acc. to AGI a20, has to be executed with uncertain adhesion characteristics 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 cutting panels.
- Before the start of the installation, the floor areas have to be sectioned or rather arranged sensibly. We recommend developing a laying plan. If you wish, we would gladly carry out the planning for you.
- Cut panels as well as cut-out panels are generally to be supported sufficiently with pedestals and c-profiles.
- The defined 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-specifically.
- The installer has the responsibility to safeguard his workplace in order to exclude accidents and damages.
- A sealing tape (wall connection tape) has to be provided at all rising building elements.
- After the installation of the switch room floor, a protection covering (e.g. wood fibre panel) has to be placed on the access floor in order to avoid a damaging by follow-up work.



△ WARNING

Missing or changed construction items impair the function of the switch room floor and can cause material damage as well as personal damage.

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

Please consider product specification sheets and safety data sheets, with use of glue and sealing.



4.1 Standard components



Picture 1 Components for switch room floors

- 1 Raised floor panels stacked on a wooden pallet
- 2 Lindner pedestal glue
- (3) Wall connection tape
- (4) SW raised floor pedestals
- (5) Gaskets with 4 or 2 knobs, conductive or non-conductive
- (6) Lindner locking glue, solvent-free
- (7) Lindner subfloor sealant 1C
- (8) Lindner edge sealant, solvent-free
- (9) Aluminium compensation pads 0.2 mm and 0.5 mm
- (10) Hammer head screws
- (11) Reinforcement profiles / C-profiles / Reinforcement tube



4.2. Optional components



These components may be ordered optionally.

Picture 2 Optional components

- (12) Lindner subfloor sealant 2C
- (13) Wall connection made from mineral wool
- (14) Cable tray clamps
- (15) Hammer head screws
- (16) Earthing clamps
- (17) Bracing eyes
- (18) Panel screwing

- (19) Bracing M6 M12 with threaded bolt
- (20) Panel with cut-out for inserts

Indication

The shown optional building parts are not being processed in this guideline. Application and execution is being explained in detail-drawings or installation-guidelines to different systems

5. Necessary tools for the installation



- 1 Rotating laser, levelling device or optionally hose levelling instrument (without illustration)
- (2) Vacuum cleaner
- 3 Broom
- 4 Band saw
- 5 Caulking gun
- 6 Ratcheting ring wrench
- (7) Square
- 8 Vacuum suction lifter
- (9) Spike lifter with applied carpet coverings
- 10 Wedges from plastic or wood

- (1) Metal circular saw
- (12) File
- 13 Folding metre stick
- (14) Pen / pencil
- (15) Cutter
- (16) Caulking gun for cartouches
- (17) Brush
- (18) Raised floor water level
- (19) Angle grinder
- ⁽²⁰⁾ Sprayer to applicate subfloor sealant

6. Floor installation

6.1. Cleaning and sealing of subfloor



Picture 4 Cleaning of the subfloor

Picture 5 Application of the subfloor sealant

Work steps:

- A 6.1.1 Before the installation, the subfloor has to be cleaned by vacuuming.
- A 6.1.2 Apply the subfloor sealant (processing according to the standard of the 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 so far advanced, that no further, considerable shrinkage is to be expected.
- 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.
- Possible bulkhead systems in floor and walls must not be treated with a subfloor sealant.
- Safety data sheet is to be considered.



6.2. Fixing and checking of height reference points



Work step:

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



6.3. Preparing pedestals and reinforcement profiles for the installation



Picture 7 Cutting the C-profile on the length of the room

Work step:

A 6.3.1 Cut the profiles on the length of the room by using a metal circular saw. The cut profile is now layed onto the subfloor with the slotted side up.

When cutting with the metal circular saw, safety glasses as well as ear protection have to be worn unconditionally.

The profile has to be placed against the back stop of the circular saw and lay even on the circular saw table.

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6.4. Installing the pedestal head



Picture 8 Fixing the pedestal head with hammer head scews - on the left side



Picture 9 Fixing the pedestal head with hammer head screws - on the right side

Work steps:

- A 6.4.1 At the beginning and the end of the profile, a pedestal head will be installed with hammer head screws and a wrench.
- A 6.4.2 Insert the hammer head screw into the slot and rotate it by 90°.

Please make sure the hammer head screw fits accurately into the profile. Only now, the hammer head screw may be fixed by using the wrench.

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6.5. Setting up the pedestals



Picture 10 Setting up the pedestal heads to the dimensions between the axis

Work step:

A 6.5.1 Set the pedestal heads to dimensions of 600 mm between axis and install them onto the profile as in work step 6.4.1.





6.6. Setting the pedestal base



Picture 11 Setting the pedestal base

Work step:

A 6.6.1. Insert the pedestal base into the tube of the pedestal head. Please pay attention to the minimum insertion of 2.5 cm.



6.7. Setting up the reinforcement profile



Picture 12 Applying the pedestal glue and setting up the first profile

Work steps:

- A 6.7.1 The pedestal glue is applied onto the pedestal base (in the size of a walnut) by using a caulking gun. (Consider safety data sheet)
- A 6.7.2 Rotate the profile and pedestals by 180° and put them into the correct position.
- A 6.7.3 Pay attention that the pedestal heads or profiles under no circumstances touch a rising construction element (distance = 10 mm).

The first and the last pedestal will be levelled towards the height reference point.

After this has happened, the remaining pedestals will be pushed into the adhesive bed and screwed up until the profile is reached.

6.8. Installing the second row



Picture 13 Installing the second row

Work steps:

A 6.8.1 The second row of pedestals is prepared and installed the same way as the first. (6.7)

Please pay attention that the distance of the axis of the profile to the wall always has to be smaller than 600 mm.

This way cut panels may be cut accurately to fit when there is a wavy form of the walls.

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6.9. Adopting the height level



Picture 14 Adopting the height level and adjusting the distance

Work steps:

A 6.9.1 With a raised floor water level, you can adopt the height level of the first row of the switch room profile onto the second.

The distance of the second row of switch room profiles has to be less than 600 mm between the wall and the axis of the profile.





6.10. Installing the connecting profiles



Picture 15 Setting up connecting profiles between the first and second row

Work step:

A 6.10.1 For the connection between the first and second row of switch room profiles, connecting profiles have to be cut individually to fit to the clear opening between the two rows of profiles.

The cut connection profile will now be set onto the pedestal head.





6.11. Fixing the connecting profiles



Picture 16 Fixing the connecting profiles to the pedestal head

Work step:

A 6.11.1 Insert the hammer head bolt into the slot and rotate it by 90°.

Afterwards, fix the hammer head screw by using the ring wrench.

Please pay attention to installing the short profile with a little space.



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6.12. Installing the second row



Picture 17 Installing the second row

Work steps:

- A 6.12.1 The profiles which were factory-cut to 557 mm provide the exact distance for the second row.
- A 6.12.2 The distance of the cross connectors has to be set to an axis distance of exactly 600 mm and fixed with hammer head screws.

As soon as the pedestals and switch room profiles are adjusted to the exact height, locking glue has to be applied to the area of the screw nut to avoid a height displacement.

Indication

• When there is a wavy wall, we recommend to start with the second panel row moved to the inside of the room by roughly half a panel width (300 mm). The panel at the wall is then to be used as cut panel.





Picture 18 Assembling cut panels

Work steps:

- A 6.13.1 Determine dimensions of cut panels and transfer them onto the raised floor panel. Mark the required cutting line.
- A 6.13.2 Cut the panel along the cutting line with a band saw.



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6.14. Applying the wall connection tape to the cut raised floor panel



Picture 19 Applying the wall connection foam

Work steps:

- A 6.14.1 Apply the edge sealant to the cut edge and let it dry according to information given by the manufacturer.
 - A 6.14.2 Glue the wall connection tape onto the cut side, about 1 mm below the upper edge.

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6.15. Applying wall connection tape to raised floor panel



Picture 20 Gluing of wall connection tape

Work steps:

- A 6.15.1 Unroll the wall connection tape and glue it with the adhesive side about 1 mm below the upper edge of the raised floor panel (two sides with corner panels).
- A 6.15.2 Cut the wall connection tape according to the edge length of the panel.

	Indications
•	A wall connection tape has to be glued to panel edges with a connection to a wall.
•	Important: There are various execution variants for the fittings of the wall connection (e.g. for fire protection reasons) – therefore see the information sheet "Fitting of wall connections NORTEC and LIGNA"

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

Always cut away from the body.



6.16. Installing the first raised floor panel



Picture 21 Laying of the first raised floor panel

Work steps:

A 6.16.1 When the first rows of the switch room floor are installed and levelled, you can begin installing the raised floor panels.

On the crossover points of the profiles, gaskets with 2 or 4 knobs have to be applied with glue to minimize direct sound transmission.

A 6.16.2 Check the levelling towards the reference point again and, if necessary, reposition the pedestal.

Indication

• Consider the direction of the covering with factory -applied coverings.

6.17. Completing the first row of panels



Picture 22 Completing the first row of raised floor panels

Work step:

A 6.17.1 Further raised floor panels of the first row may be installed now.

Indication	
• Important: Please make sure that the first row of panels is adjusted accurately as the further installation of the floor is based on it.	

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6.18. Installing further rows of panels



Picture 23 Installing of the second row of panels

Work steps:

A 6.18.1 Complete raised floor panels can be applied directly. Please make sure that no shift of grid will occur.

Adjust C-profiles in a way that the panels fit together with the substructure.



6.19. Completing the installation of the second row



Picture 24 Installing the second panel row

Work step:

A 6.19.1 Install the second panel row.



Important: Loose panels can be smoothly adjusted with the nut of the pedestal or height compensation pads from aluminium might be used.





6.20. Locking the switch room pedestals to avoid height displacement

Picture 25 Securing the threaded nut

Work step:

A 6.20.1 Apply locking glue onto the thread area to avoid height adjustments. (Consider safety data sheet)

Indications

- **Important:** All pedestals (as well as pedestals in the following work steps) have to be locked to avoid height displacements after they have been exactly adjusted.
- **Important:** The instructions for the processing of the Lindner locking glue can be found in the current data sheet and safety data sheet.

6.21. Installing the remaining switch room floor rows



Work step:

A 6.21.1 The remaining switch room floor rows have to be installed accurately like the first two rows. (6.16 - 6.19)

Indication
• Important: Shift of grid has to be checked and you have to pay attention to the proper height adjustment.



6.22. Assembling the substructure for a switchboard



Picture 27 Preparing the substructure for a switchboard

Work step:

A 6.22.1 When integrating switchboards or distribution cabinets, we recommend to place them on top of separate frame constructions made from CM or CH profiles. The system depends on the load of the cabinet and should be clarified with the Product Management Floor systems. For this purpose, the switchboard or distribution cabinet needs to be measured accurately.

The accurate dimensions should be left out in the area.

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6.23. Installing the substructure for a switchboard



Picture 28 Assembling the CM or CH profiles

Work step:

A 6.23.1 Cut the CM or CH profiles to the correct length and attach them to the SW pedestals with hammer head screws.

The cross profiles are to be installed to wind up centered, up front as well as on the backside of the switchboard.

6.24. Placing the raised floor panels on top of the substructure



Picture 29 Placing the raised floor panels on top of the substructure

Work step:

A 6.24.1 Now the raised floor panels may be placed on top of the substructure.

Panels which are cut around the frame of the CM or CH profiles are to be measured and sealed like panels by a wall. After that, wall connection tape has to be applied before the panels are installed.





Picture 30 Position of the C-profile and the raised floor panel

Work step:

A 6.25.1 Ideal positioning of the switch room profile and the raised floor panel.





6.26. Transport of the switchboards



Picture 31 Transport of a switchboard

Work step:

A 6.26.1 Since switchboards are sensitive elements, they should only be transported with trolleys. The load points are allocated to four wheels.

Indication According to usage and weight, load distribution panels have to be laid out to for the transport the switchboards. Please clarify this with the Product Management Floor Systems in advance.



6.27. The set-up switchboard



Picture 32 Correctly installed switchboard on substructure

Work step:

A 6.27.1 Correctly set-up switchboard on a substructure of CM or CH profiles.

	Indications
•	There are no installation steps for the bracing of the raised floor area included in this installation guideline. These are necessary to take up the horizontal loads which are affecting the floor system.
	They 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 any help.



6.28. Disposal



Please consider an environmentally compliant disposal of the packaging, adhesives, sealants and occurred waste of the installation according to local regulations.

Please search for possibilities of recycling or an 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

Lindner Service:

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- Deconstruction and Gutting
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