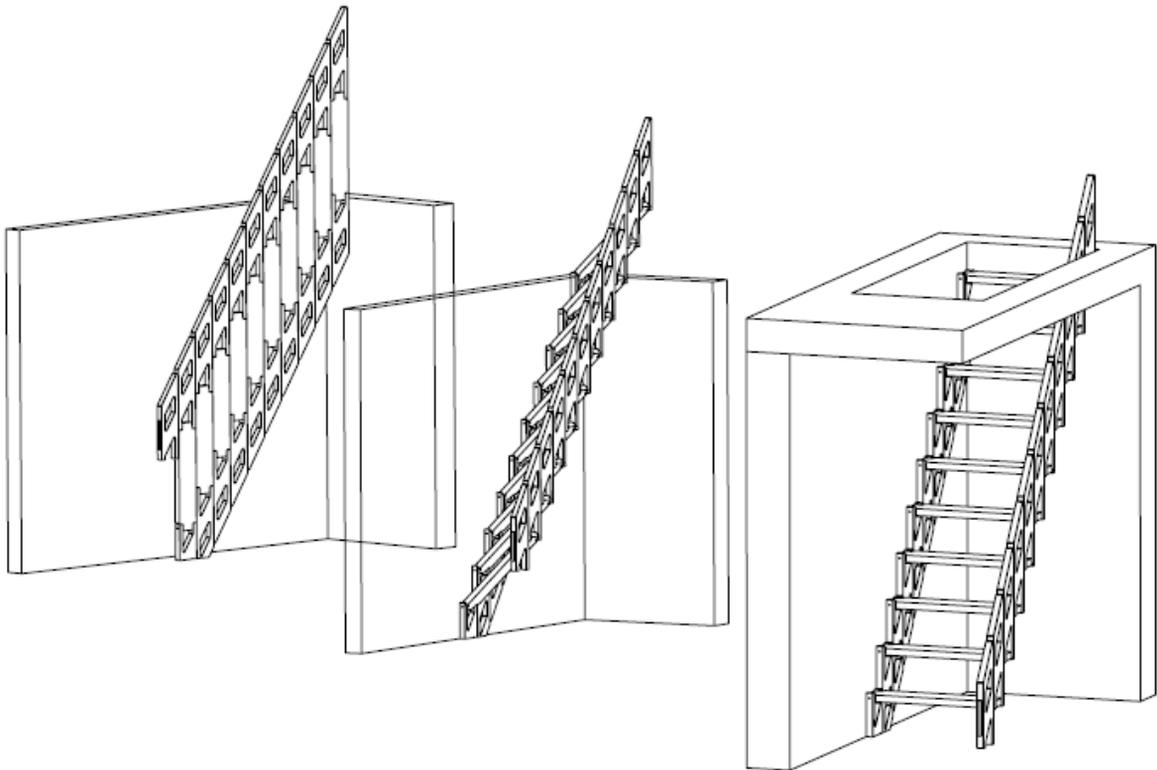


k/apster



Installation instructions Klapster Slim/Ultralight

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In order to enable professional and unproblematic assembly, we ask you to familiarise yourself with the following pages before starting assembly, as they provide you with helpful information that must always be considered.



Pay particular attention to comments with a note symbol. This draws your attention to steps which, if carried out incorrectly, could lead to damage to the product or the mounting wall.

For support we also recommend the installation video in the download section of our website!

<https://www.klapster.de/downloads>

1. Product Klapster

1. Product information

Klapster is a modular system in several versions. With the modular system, any desired floor height can be achieved by combining matching construction elements. From the floor height (floor coverage to floor coverage) reported to us results the number of steps and the gradient of your folding stairs. The accurate data for your delivered staircase can be found in the enclosed final invoice.

2. Installation check

The installation of Klapster must be checked against the following factors:

- **Mounting surface:** The mounting surface on your wall must be sufficiently long. How long exactly depends on your floor height, the gradient of the stairs and the Klapster model. The narrowest Klapster model (Ultralight) can be installed, for example, with a floor height of 265cm starting at 112cm mounting surface (run length).
- **Ceiling opening:** When folded up, the steps and outer stringers of the staircase rest against the wall on a flat surface. Therefore, the folding stairs need sufficient space upwards. We recommend extending the ceiling opening up to the wall so that Klapster can be mounted directly on the wall. If it is not possible to extend the ceiling opening and a distance between wall and ceiling opening has to be bridged, the stairs cannot be screwed directly to the wall. For distances of up to 9cm we can offer you spacers. For larger distances, an assisting stringer made out of wood, brick or plasterboard, for example, must be installed. For assistance with installation, please consult your local carpenter.
- **Counter bearing / bearing surface of the outer stringer:** The exiting tread of the folding staircase (movable stringboard on top) always requires a counter bearing on which the outer stringer can rest. Usually this is the ceiling, the front side of a mezzanine or the beams construction of a loft bed. The bearing surface (e.g. ceiling thickness) must be at least 10cm.
- **Wall structure:** Klapster can be mounted on a wide variety of walls (brick, concrete walls, drywall, etc.). Primarily the weight of the stairs is transferred via the stringboard structure. Intermediate or dry walls are therefore also suitable for installation. For drywall walls, it is essential to use **wooden supports and not metal profiles**. It is essential that you mark the position of the supporting structure so that you can later **screw the staircase to the underlying structure**.
- **Sloping ceilings:** All Klapster models require 100cm of space upwards from the last step when folding. If you have sloping roofs that begin shortly after the ceiling, check whether the Klapster can be folded up as follows: Floor height (floor to floor) minus 1x gradient of the stairs + 100cm. If you want to install handrail modules for the outer stringer for Klapster Comfort, the height of the stringer is increased by the height of the handrail (42cm). Details can be found in the data sheet "Handrail" in the download area.

2. Safety instructions

2.1 Appropriate usage

The folding stair is designed for the usage as an assistant stair. It does not comply with the building law requirements of necessary or non-necessary stairs, according to DIN 18065. Only original components are to be used for assembly and maintenance.

Klapster also falls **outside** the area of application of the European guideline ETAG 008. According to the country-specific building regulations, the building owner must check whether the use of a retractable or folding staircase is permissible for his installation situation.

 Only use original components to install and maintain the stairs.

The combination of Klapster with components from other manufacturers and with accessories other than those mentioned in these assembly instructions may impair safety and is not permitted. The use of the Klapster system to transport loads is not intended and is not permitted (load capacity of the Ultralight-version =110 Kg, load capacity of the Slim-version – 140 Kg).

The material of the folding stairs is only suitable for **indoor** usage. When folding in or out, make sure that you always guide the stairs by the outer stringer to the floor or wall. Letting go beforehand could damage your stair and floor.



Incorrect grabbing at the step elements could cause the fingers to be squeezed.

Any other use is considered contrary to the regulations and is not permitted.

2.2 Product safety

The folding staircase may only be used in a technically perfect condition and in accordance with the intended use, being aware of safety and risks, and in compliance with the installation instructions.

Faults that could impair safety (e.g. deviations from the conditions for permissible, intended use) should be removed immediately.

2.3 Installation

- Check the delivery for completeness of the components. Check all components for damages and sort them out.
-  Before starting the installation, check the floor height on the enclosed invoice for accurate measurements. In case of dimensional deviations, please do not start the installation, but contact the manufacturer.
-  Only use dowels or fasteners that fit your masonry and are designed for sufficient load capacity. It is necessary to pay attention to the manufacturer's instructions for use (dowels, screws, etc.).
- If installation aids (e.g. ladders) are used, the respective operating and user instructions must be followed.
- At least two persons are required to mount Klapster on the wall (three persons are recommended).

3. Maintenance tips

 In general, impurities on all surface coatings should only be cleaned with suitable substances that are gentle on the material. Do not use any acids or alkalis that could attack the surfaces. Individual care instructions for the different surface coatings are given in the following table:

<ul style="list-style-type: none"> • Natural, untreated 	<p>The natural wood version is very sensitive to dirt, so treatment with oil, varnish or similar is recommended. Precisely fitting anti-slip foils that protect the surface can also be purchased as accessories. Impurities can only be removed with fine-grained sandpaper (e.g. grit 180).</p> <p>The layer thickness of the veneer is 0.8mm - this can be removed if you overgrind.</p>
<ul style="list-style-type: none"> • Oiled 	<p>Dirt can be removed with a dry towel.</p> <p>Please note that over time, oils are more strongly absorbed into the wood pore and evaporate. It is therefore recommended to reapply some oil in regular intervals.</p> <p>▲ We recommend the following oil: Hesse Lignal NATURAL-OIL OE 83-2 farblos matt</p>
<ul style="list-style-type: none"> • HPL-Surface coating 	<p>▲ Thanks to the closed surface, HPL coatings are relatively easy to clean. Usually, moderate soiling can be removed with a clean, soft sponge and warm water with the addition of household, non-abrasive cleaning agents.</p>

4. Disposal

Disassembly takes place in reverse order to the assembly. The product must be disposed of properly in accordance with its materials and regional regulations.

5. Gradients

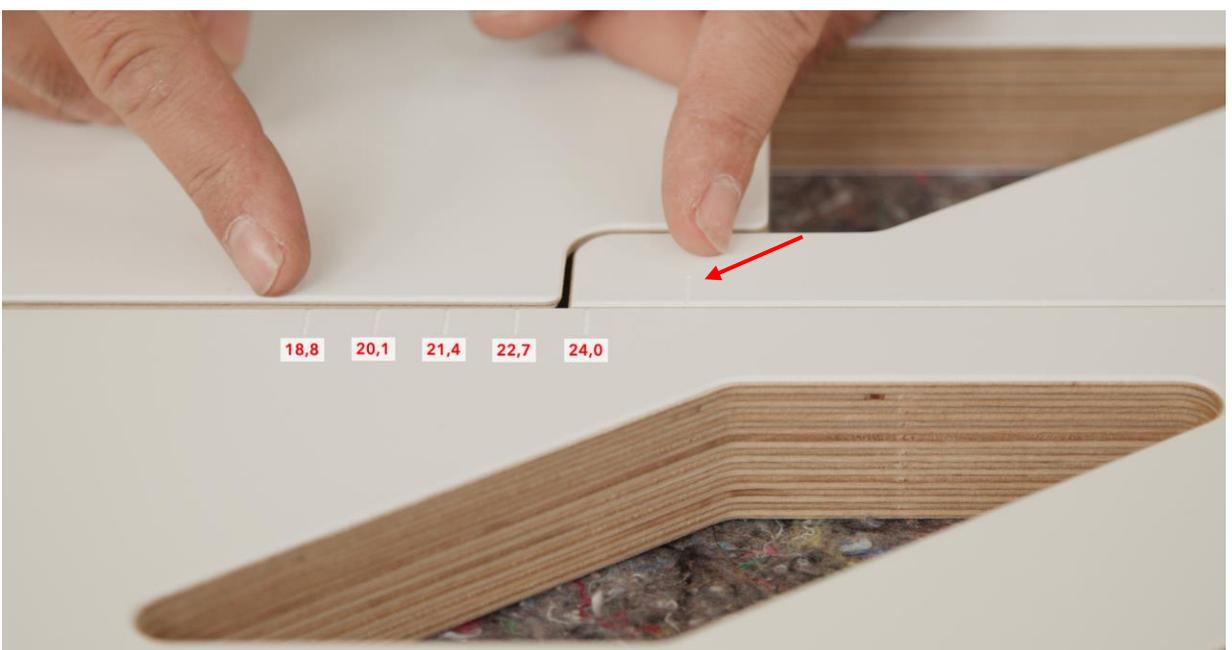
Due to the variable plug system **Klapster SLIM & Klapster Ultralight** allow to adjust the stairs for up to five different gradients. Depending on your ceiling height, the optimal number of steps and the appropriate gradient has already been determined. **You can find the gradient and the number of steps on your invoice.**

During assembly, both the positioning of the marker on the sleeve and the marker on the stringer pieces must be adjusted to the individual gradient.
(see steps 8.1.3 & 8.1.9)

Position of the expansion sleeve



Position of the stringer piece

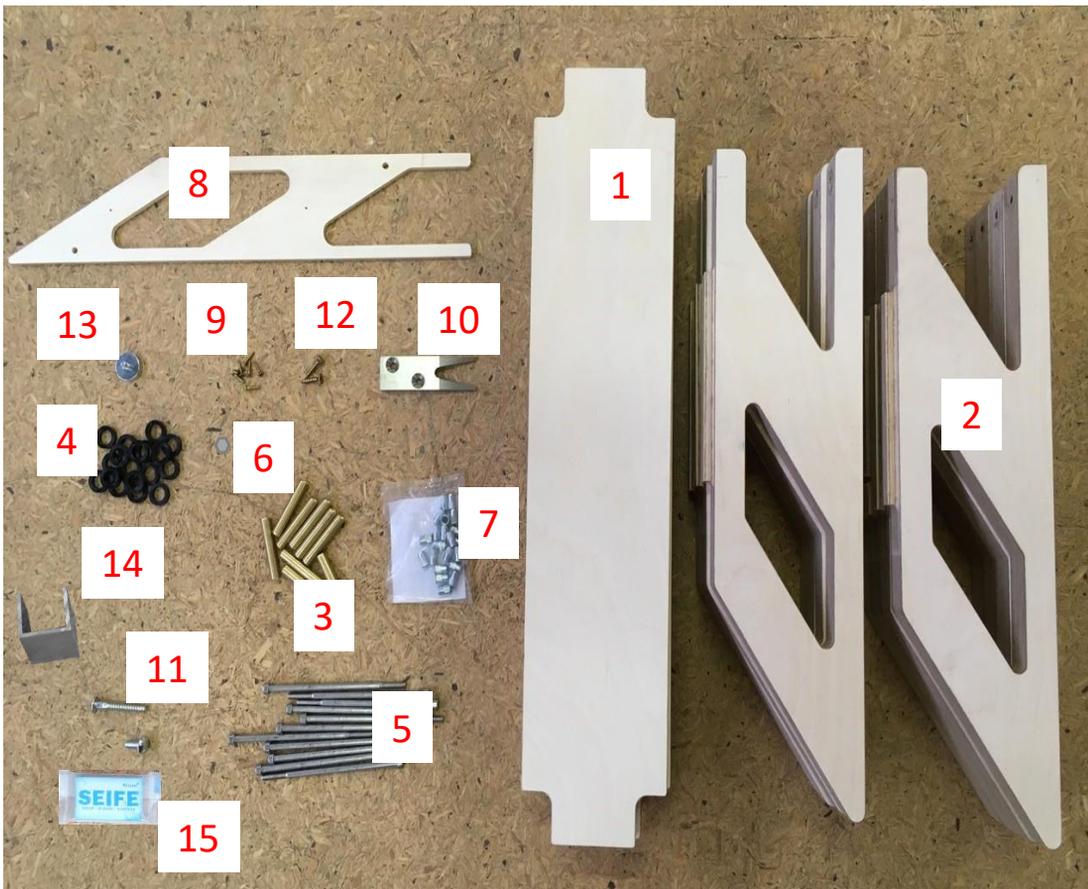


6. Tools to be provided on Site



- Cordless screwdriver
- Mallet/rubber mallet (unstaining)
- Folding ruler
- Pencil & Marker
- Allen wrench/ allen attachment for the cordless screwdriver (size of the attachments: 5mm)
- Screws, e.g. 6 x 100mm
- (Fitting for your wall properties)**
- Spirit level/ straightedge
- For stone or concrete walls: Masonry drill and matching dowels
- Open-end spanner with wrench size 10

7. Delivery contents Klapster



1. X · steps (depending on your ceiling height)
2. X · stringer pieces (2 per step + 1 additional)
3. X · Brass sleeves (2 per step)
4. X · spacer sleeves (4 per step)*
5. X · axis screws (2 pro Stufe+ 1 gekürzt)*
Ultra-Light: M6x110mm, 1 · shortened M6x100 **SLIM:** M6x140mm 1 · shortened M6x130
6. 1 · Nut M6
7. X · **expansion** sleeves (1 per stringer piece)
8. 4 · spacers
9. 8 · **Screws for the spacers 3x16mm (2 per spacer)**
10. 1 · tap fitting
11. 1 · screw of the tap fitting 7x50 and 2 · magnet screws
12. 2 · Mounting screws of the tap fitting 5x25*
13. 2 · **potmagnets** with external thread
14. 1 · Shock protection (u-profile)
15. 1 · Soap

*The scope of delivery includes additional spare parts

8. Installation instructions

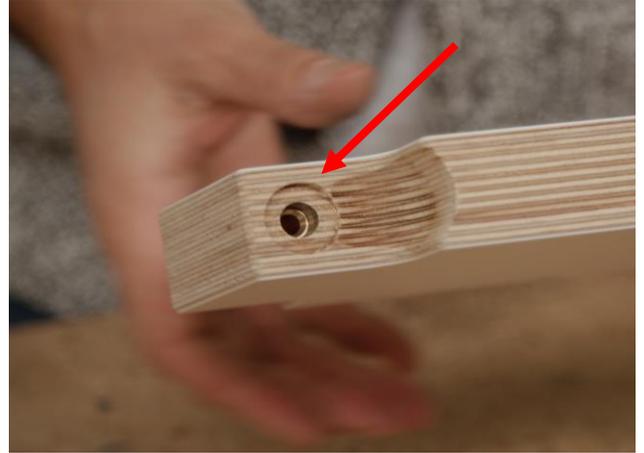
8.1 Assembly Klapster Ultralight / Klapster SLIM



8.1.1

Remove all components from the package and spread them on a clean surface (if necessary on a protective foil or cardboard). Start by hammering the brass sleeves into the step elements on each side.

Ultra-Light: The brass sleeves must be knocked in flush.



SLIM: The brass sleeves must be knocked approx. 10mm deep into the drill hole, so that it's centered (see the picture).

A drift makes installation easier, alternatively the first sleeve can be pressed in with a further sleeve. Further alternative: You can use the screw head of the axis screw to knock the sleeve in.

⚠ Use a rubber mallet, otherwise you might damage the thread of the axis screw..



8.1.2

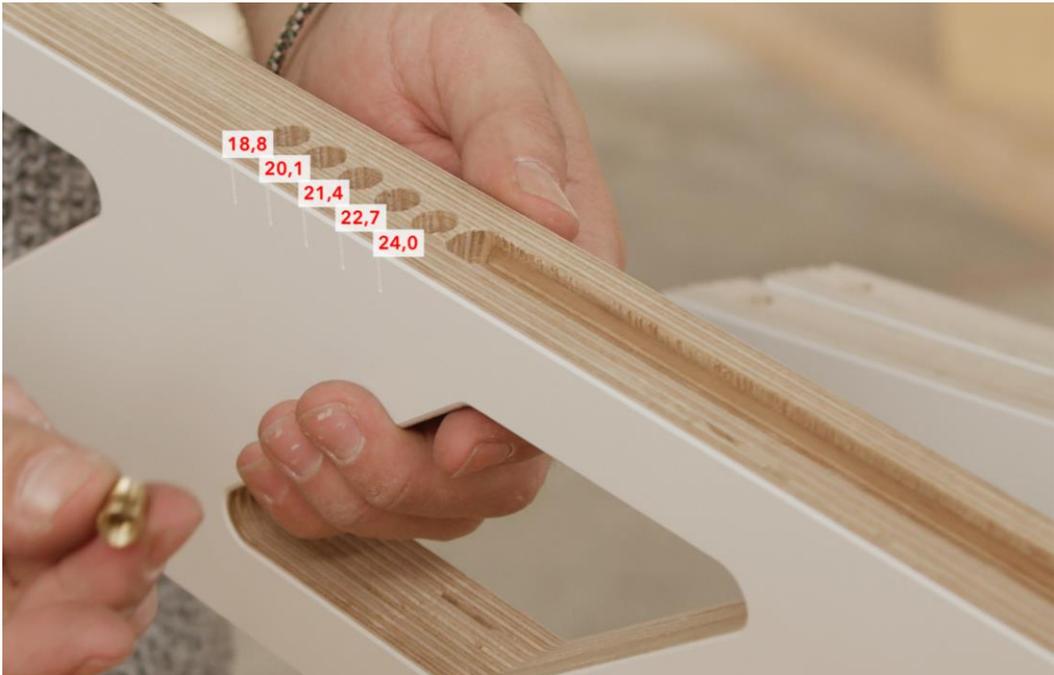
Then press the black spacer sleeves into the lowered hole of the step and, if necessary, help with a hammer.



8.1.3

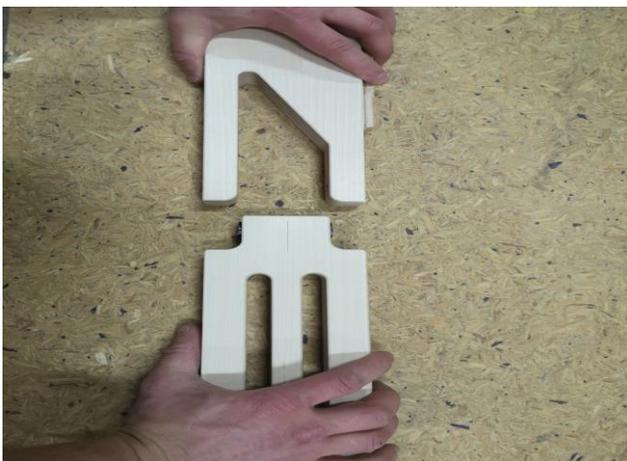
Installation of the expansion sleeve: The expansion sleeve has to be put into the hole, designated for the individual gradient. (see 8.1.4)

⚠ The gradient for your ceiling height can be found on your final invoice.



8.1.4

Press the expansion sleeve into the drill hole required for your gradient. The sleeve must be flush with the drill hole. If necessary, use a hammer.



8.1.5

Now follows the assembly of the stairs. The staircase is assembled piece by piece, pre-assembly of the individual stringer elements is **not desired**.

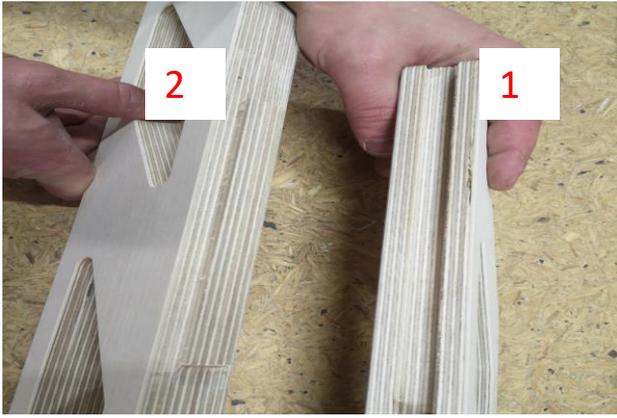
Assembly of the **outer** stringboard: Slide a step element into a stringer element. Start on one side only and **DO NOT add the stringer element to the opposite side**.



8.1.6

Now insert the axis screw through the hole into the stringer and step. The inserting side corresponds to the "pointy" side of the stringer element (or the side on which the axis bore hole is countersunk in order to accommodate the screw head of the axis screw).

⚠️ Insert the axle screw into the stringer piece so that the end of the axis is flush with the stringer element. The head of the axis initially sticks out about 1.5 cm from the drill hole. Please note that your package includes an additional axis screw which is slightly shorter than the others. This is to be used only at the very end (see point 8.1.17).



8.1.7

The stringer pieces each have a milled dovetail joint. This consists of a groove (1) (milled recess) and a tongue (2) (a kind of positive form of the groove), by means of which the stringer parts can be joined together. Always align the stringer pieces so that tongue and groove are opposing each other. Position the groove at the lower end of the tongue and push the tongue and groove together until you feel resistance. To aid the assembly, the positive shape of the plug connection (male part) can be moistened with a little soap.



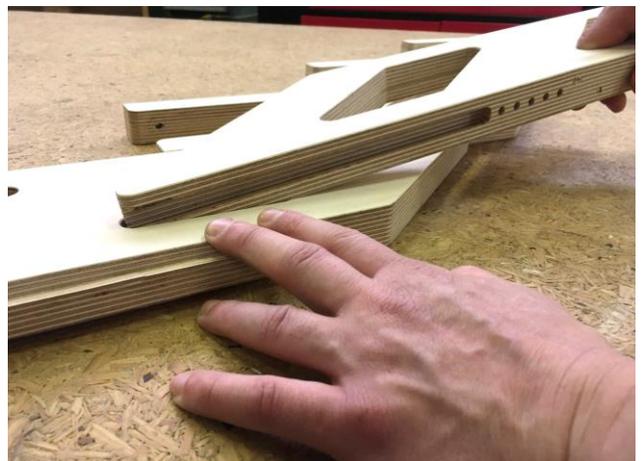
8.1.8

Take the gradient of your stairs from your order confirmation or your final invoice and set the gradient according to the illustration (see point 5). Place the shock protection onto the inner plugin. Take a hammer and gently tap the groove component along the inner plugin of the stringer until a positive dovetail connection is made and the marking lines of the stringers match. This can be a little difficult, but it is intentional. Tap the stringer piece firmly but carefully. Remove the protection afterwards **▲ Be sure to use a rubber mallet or a supporting material underneath**, otherwise the stringer piece may be damaged. Take care not to exceed the markings. The markings must be exactly aligned, otherwise the axis screw cannot be mounted.



8.1.9

The correct alignment of the markings looks like this, for example. This varies with the selected gradient level (for example, the highest gradient of 24cm is shown in the picture).



8.1.10

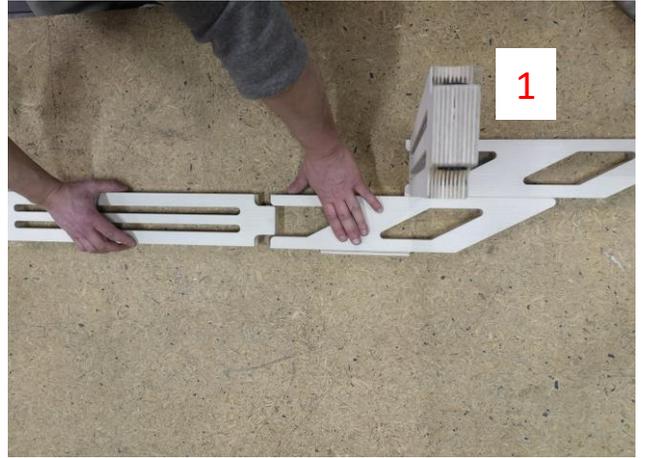
If you accidentally exceed the markings, use another component to knock it back gently. Place the tip of another stringer into the inlay of the installed stringer. Tap back the component into the desired position. Alternatively, you can tap the component back over the tip with the help of a pad (see the assembly video).



8.1.11

Screw in the axis screw completely. This will support the step and connect the stringer pieces. Then move the step and check the friction between stringer and step. The step should not remain fixed in any position, but it should also not fall down easily. Unscrew the screw again if the step is difficult to move in the stringer, or a little further in if the friction is too low. A slight cushioning is optimal.

⚠ (If the axis screw cannot be screwed in, this is because the drill hole is not in alignment with the screwed-in sleeve. Move the components slightly back and forth or tap the stringer a little further in so that the axis can be inserted.)



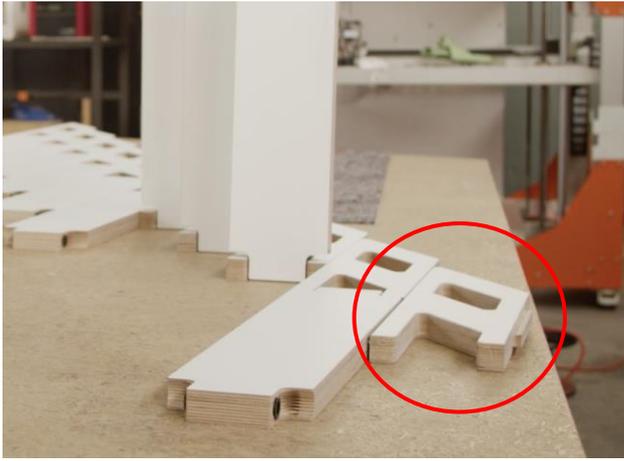
8.1.12

Place the step up vertically (1) and repeat the previous until all of the steps have been installed.

When tapping in, always make sure to choose the marking line that matches your gradient and align it with the reference line.

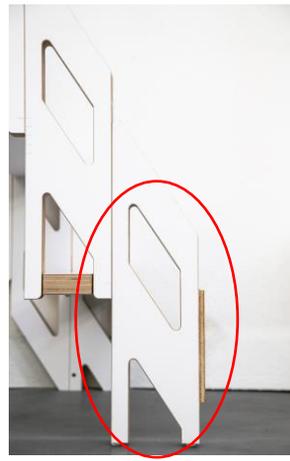


Always fold up the last two steps to install the axis screw of the next component.



8.1.13

When all steps have been installed, add an additional stringer element on the outer stringer. This element does not have a counterpart or step element. (see 8.1.14)



8.1.14

This additional component serves as a floor attachment of the outer stringer.



8.1.15

Install the components of the **inner** stair stringer on the opposite side. **The placement is crucial here.** The components of the inner stringer should be attached diagonally mirrored (compare the placement on the photo).

⚠ As with the outer string, it is essential that the markings match correctly. Make sure that you set your individually required gradient correctly.

In order to be able to insert another component into the plug connection, you must fold the opposite steps up vertically.





8.1.16

In order to install the axis screws, you have to fold the inner stringer slightly upwards. To prevent it from folding in, put some of the packaging material supplied underneath. Raising the steps makes it easier to screw in the axis screws.

For the screw connection of the final stringer component, see the next point.



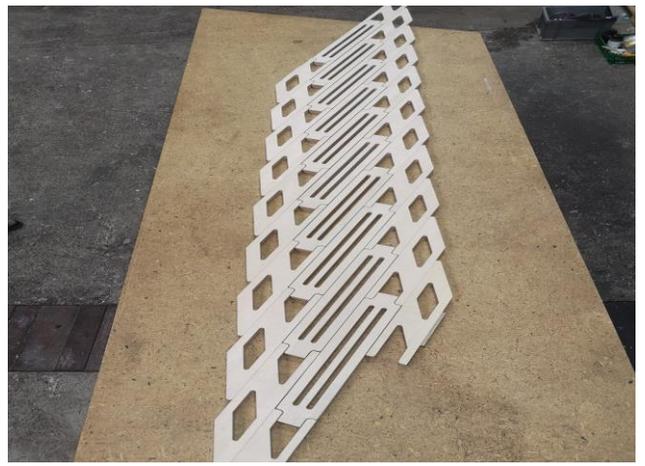
To prevent the stairs from folding in, place packing material below it (1) in regular intervals. Alternatively, you can also assemble the inner stringer in the upwards position (2).

⚠ There is a danger of squeezing fingers and the stairs may be damaged if they fold out uncontrollably. If you want to assemble the stairs folded out in the upwards position, it is advised to have the stringers secured by a second person against unintentional folding in.



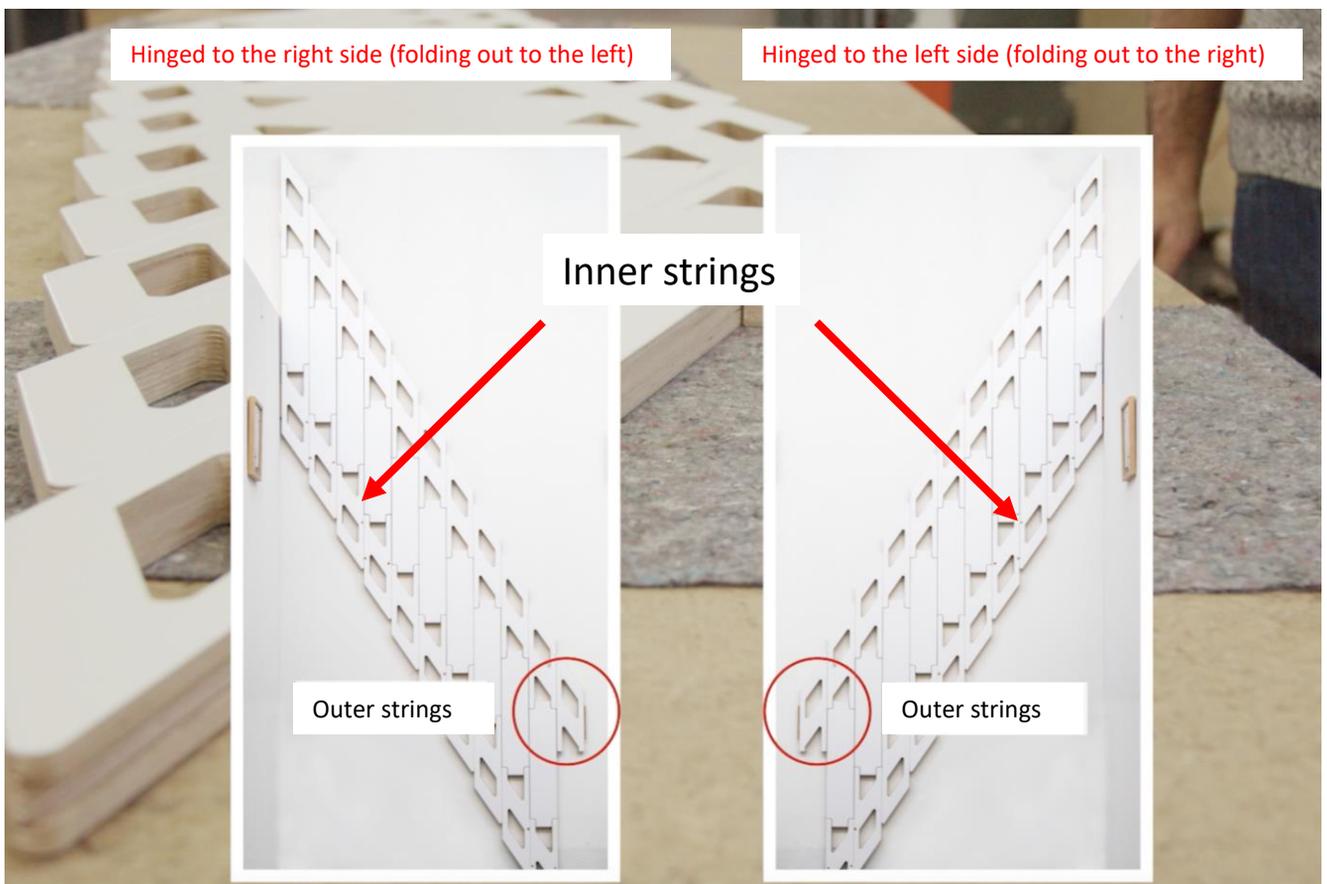
8.1.17

To screw the last stringer of the inner stringboard (exiting tread), use the shorter axis (10mm shorter axis screw) supplied. Insert the axis screw and screw the nut to the axis screw using a pair of pliers.



8.1.18

The fully assembled staircase should now look as depicted in the picture.

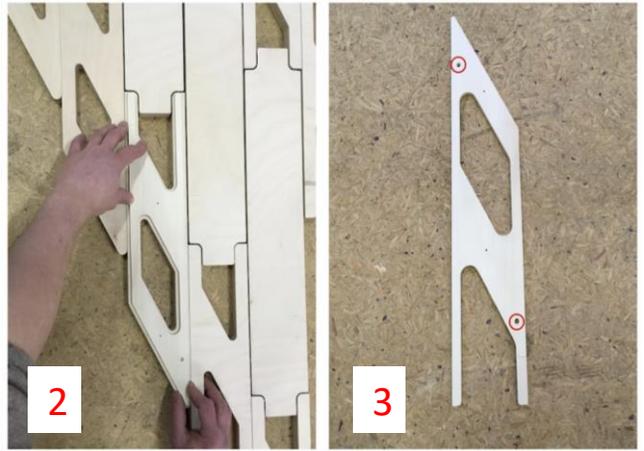
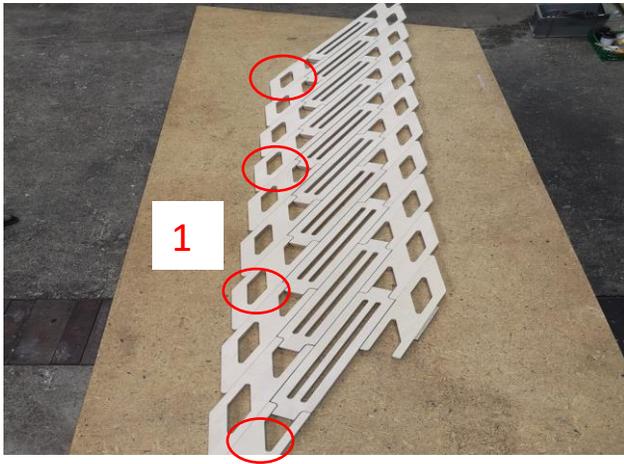


8.1.19

Preparation for wall mounting: The drill holes for the later wall mounting are set on the visible side (the side that will later face the room). The staircase must therefore be aligned in such a way that the desired folding direction can already be achieved when lying down.

Assume that you are standing at the foot of the stairs: If the stairs are to be folded out to the left, you have a staircase hinged on the right / If the stairs are to be folded out to the right, you have a staircase hinged on the left.

If necessary, the stairs must be turned over.



8.1.19 ff.

Lay out the supplied spacers (thin stringers) along the stairs. Start at the **bottom of the stairs at the second stringer element and position the remaining spacers at equal intervals, on the visible side of the inner stringer** (1). The spacers serve as templates in this step. Align the spacers in the **middle** of a stringer (2) and drill through holes in the stringboard (e.g. 6mm hole). Use the two outer holes of the spacers (3) and place a piece of wood or similar under the drilling position.

Caution: The spacers are only screwed to the staircase in the following steps.

⚠ In the case of **wooden stud constructions or drywall walls**, you must set the templates and thus the through holes depending on your possible wall fixing points (e.g. distance between the wooden supports of the wall construction).



8.1.20

Turn the staircase over (1). Place the spacers on the stringboard elements on which you have drilled the through holes. Align them with the holes (2). Screw the spacers to the stringers (small holes in the spacer). Use the 3x16 Spax screws.

If the pre-drilled holes in the spacers no longer correspond 1:1 with the drill holes on the stair stringers, the holes have been drilled at an angle. This is not significant but screw the screws through the visible drill holes when installing the stairs later.



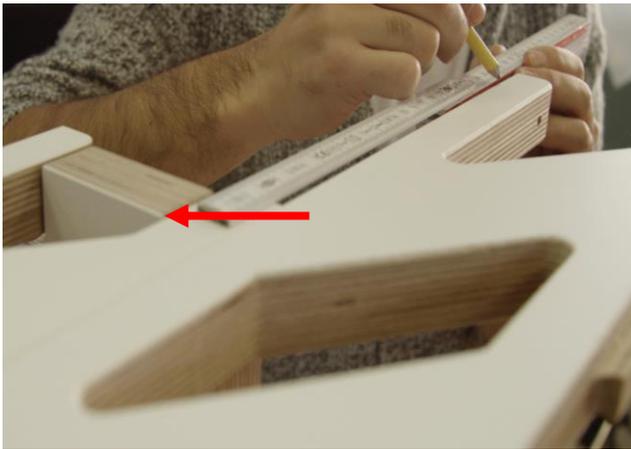
8.1.21

To shorten the starting tread: Fold out the stairs. Transfer the **tread dimension from your final invoice or order confirmation** to the **inner** stringer. Measure from the top of the step (see the picture).



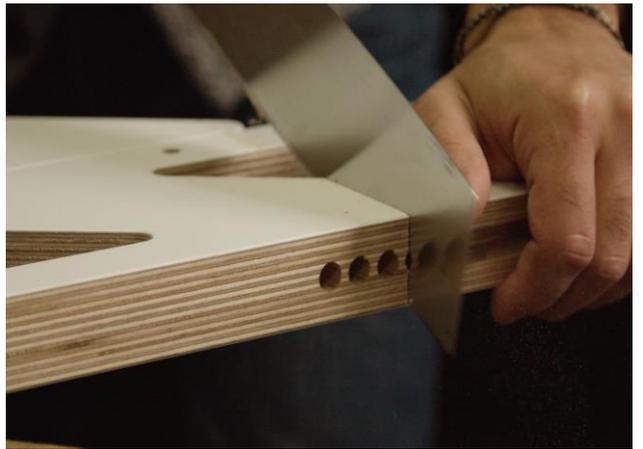
8.1.21 ff.

Place a carpenter angle on the front side and transfer the marked dimension to the stringer.



8.1.21 ff.

Transfer the **tread dimension from your final invoice or order confirmation** to the **outer** stringer (the singular stringer without a step element). Measure from the top of the step (see picture). Create an angle at the front and transfer the marked measurement to the stringboard.



8.1.21 ff.

Saw off both stringer elements at the marked cutting edges. Use a Japanese saw, hand circular saw or similar. If the sleeve is at the cut edge, pull the sleeve out of the hole before sawing. Cutting of the lowest screw connection isn't a serious problem, a screw connection at the beginning is sufficient.

8. Installation instructions

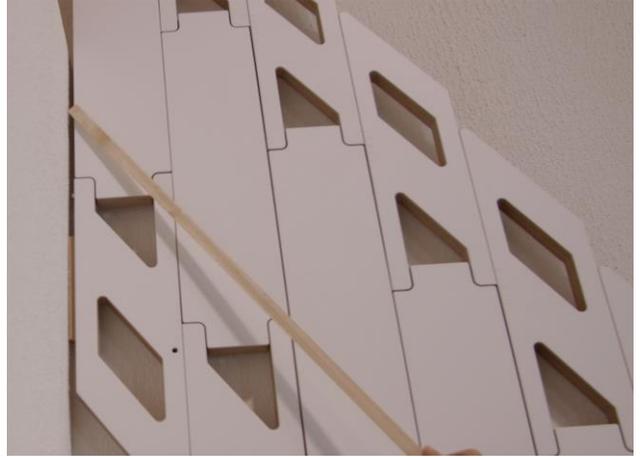
8.2 Wall mounting Klapster Ultralight / Klapster SLIM



8.2.1

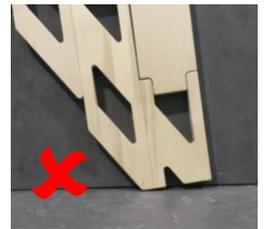
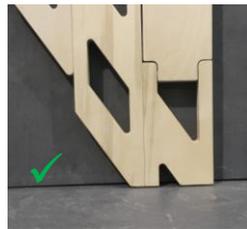
Align the stairs with the wall, ideally with at least two people.

⚠ When carrying the stairs, make sure that they are transported vertically. This will minimize the load on the stair structure and prevent it from unintentionally folding out. Please note: To install the staircase, if necessary, remove the skirting board or skirting boards at the installation site. Alternatively, the stairs must be screwed to the wall with spacers by the thickness of the skirting.



8.2.2

The staircase is correctly positioned when the exiting tread is aligned parallel to the ceiling and the starting tread of the inner stringer is resting completely flat on the floor.



8.1.2 ff.

The stairs can be finely aligned with a spirit level. The spirit level must be applied to the front of the staircase at the beginning of the outer stringboard.





8.2.3

Countersink predrilled through holes with a countersink. Countersinking prevents the coating from bursting when screwing together.



8.2.4

Wooden stand constructions: see 8.2.5
Stone or concrete walls: Before mounting, you must drill holes in the masonry with a masonry drill bit. Mark the drill holes on the wall or drill the plaster through the through hole in the stringer. Remove the staircase, drill and then insert dowels (matching the masonry) in the drill holes. Then align the staircase with the wall in its final position.



8.2.5

Screw the stairs to the wall. Insert all screws slightly loosely first before tightening all screws evenly. **Screws should be selected according to the masonry.**

⚠ If you find that the staircase is uneven on the wall afterwards, you must adjust the unevenness of your wall



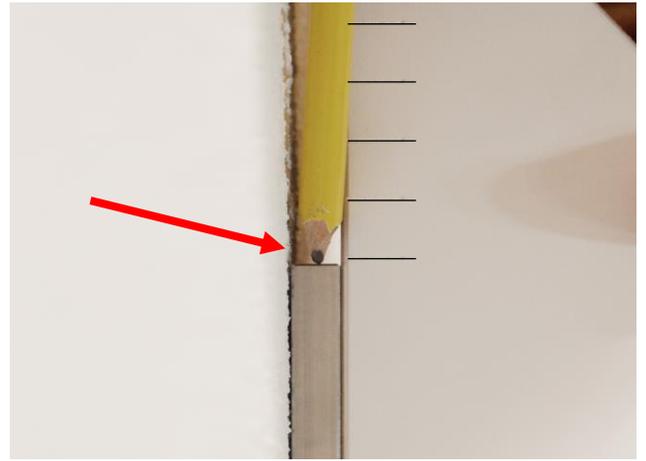
8.2.5.ff

The screw head should be screwed in flush.



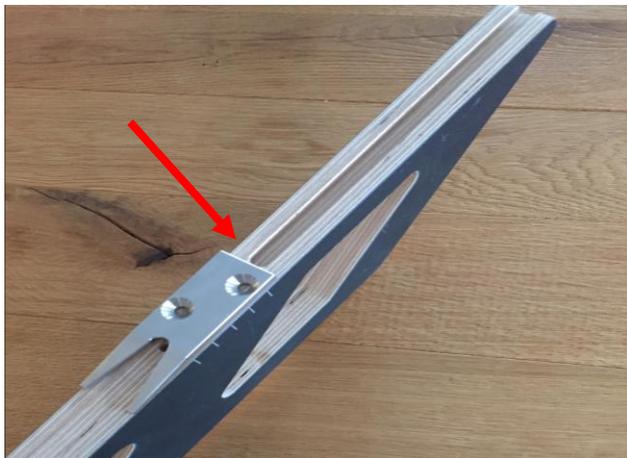
8.2.6

Mounting of the tap fitting: The next step is to mount the tap fitting. To do this, place yourself either on the upper level or on a ladder. Fold out the staircase and push the tap fitting between the exiting tip of the outer stringer and the ceiling (see photo).



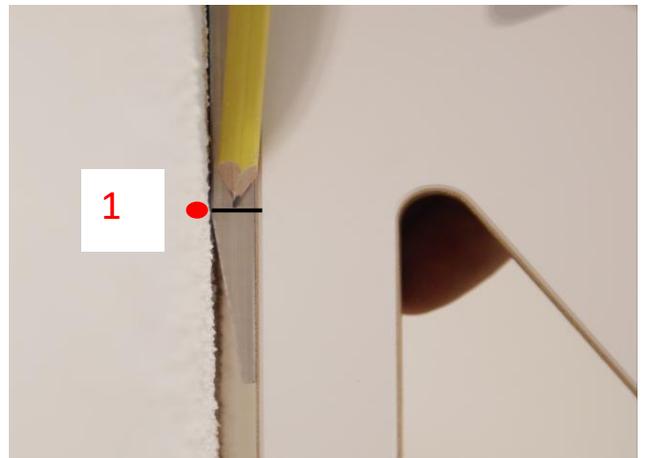
8.2.6 ff.

Align the upper edge of the tap fitting with the lower mark on the stringer.



8.2.6 ff.

⚠Thin ceiling thicknesses : The tap fitting does not necessarily have to be aligned with the lower mark (8.2.6). **It is important that the entire surface of the tap fitting rests on the front side of the ceiling.** For thin ceilings or beams, the tap fitting can be pushed up to the beginning of the groove in the stringer piece. For later installation, mark the position to which you have pushed the tap fitting on the stringer piece.



8.2.7

There is a mark on the side of the tap fitting. Use a pencil to transfer the mark (1) to the front of the ceiling.



8.2.8

Fold the stairs in. At the height of your marked position, measure horizontally 15 mm in the direction of the stairs. This position has also to be marked on the front side of the ceiling.

⚠ The marking determines the later position of the screw of the tap fitting. The exact measuring, marking and drilling of this position is therefore essential. If the deviations are too large, the tap fitting cannot accommodate the screw later.



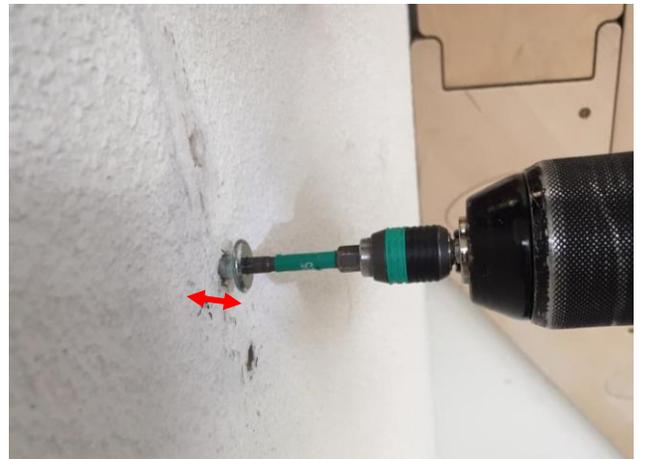
8.2.9

Depending on the properties of the ceiling, pre-drill the mounting hole at the marked position. Stone or concrete ceilings: Insert a dowel that matches the screw of the tap fitting.



8.2.10

Screw in the screw of the tap fitting.



8.2.10 ff.

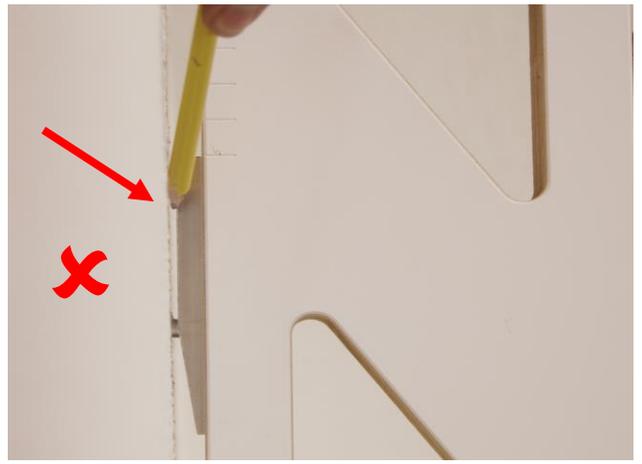
⚠ The screw head must "stick out" 3-4mm from the surface so that the tap fitting can later accommodate the screw.



8.2.11

Position the tap fitting again at the lowest mark or, in the case of thin ceilings, at the marked position (8.2.6 ff).

- ⚠ The exact positioning is crucial! (8.2.8)
- Mount the tapping fitting on the outer stringer, pre-drill holes with a small drill (e.g. 3mm) and then screw the tap fitting to the front of the stringer with the Spax screws (5x25).
- ⚠ The countersinks of the drill holes in the tap fitting must face outwards.



8.2.12

Adjusting the screw of the tap fitting:

- Unfold the staircase and check that the screw of the tap fitting is positioned almost without leeway in the leg of the tap fitting.
- This is the case if no gap is visible between the fitting and the ceiling when the staircase is completely unfolded.
- The leeway can be adjusted by screwing the screw of the tap fitting in or out.
- ⚠ The outer stringer (tap fitting) must not tap too tightly into the screw of the tap fitting.
- ⚠ To protect the front side of your ceiling from abrasion, we recommend that you attach a protection in the form of felt, cork, foil or similar underneath the tap fitting screw.



8.2.13

Installation of the pot magnets:

Drill two approx. 15mm deep holes with a diameter of 5.5mm on the inside of the outer stringer at roughly equal intervals (e.g. stringer section of stages 3 and 8).



8.2.13 ff.

Screw in the pot magnets.



8.2.13 ff.

Mounting the magnetic screw:
Position the magnetic screws on the center of the magnets. Fold in the stairs and transfer the position of the tip of the magnetic screws to the wall.



8.2.13 ff.

Depending on the properties of the wall, pre-drill the mounting hole at the marked position.
Stone or concrete walls: Insert a dowel that matches the magnetic screw.
Then screw in the magnetic screw so that it is flush.

Wood is a natural product: variations in colour and structure are natural



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