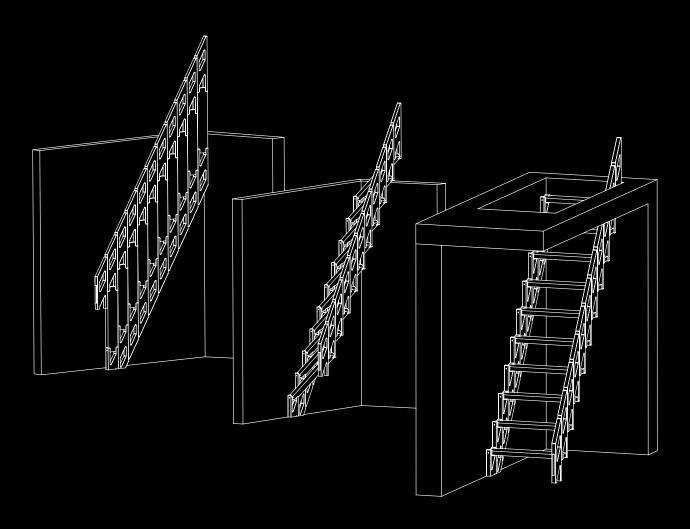


ASSEMBLY INSTRUCTION

Klapster Slim / Ultralight



Pay particular attention to comments with a caution 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/en/montage

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Product information

The Klapster system is a modular construction 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 slope of your folding stairs. **The accurate data for your delivered staircase can be found in your order confirmation or configuration document.**

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 slope of the stairs and the Klapster model. The required run length can be found in your oder confirmation or configuration document

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 9 cm 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 stair stringer 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 beam construction of a loft bed. The bearing surface (e.g. ceiling thickness) must be at least 10 cm.

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 stair stringer structure. Intermediate or dry walls are therefore also suitable for installation. For drywalls, 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 Klapster to the underlying structure.**

Sloping ceilings: Sloping roofs: All Klapster models require approx. 100 cm of space upwards when folded in, starting from the last step (for the exact measurement, please refer to your configuration document). If your installation situation contains roof slopes that could hinder the installation of Klapster, check the feasibility using the following calculation: (floor height [floor coverage to floor coverage] minus 1x slope dimension) + 100 cm. The result of this calculation is the total height that should be available below the roof slope so that Klapster can be folded against the wall without any problems.



To ensure a smooth and correct installation, we recommend that you familiarise yourself with the following pages before starting the assembly. There you will find basic and helpful information that you will need for the installation of your Klapster staircase.

Safety instructions

Appropriate usage

The folding stair is designed for the usage as an **auxiliary 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.

The scope of the European guideline ETAG 008 also **does not** apply to Klapster. 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 original components to be used for assembly and maintenance. 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 materiality of the folding staircase is only suitable for indoor use. When unfolding the folding stairs, guide them to the floor. Releasing it beforehand could damage the stairs and your floor.



When folding or unfolding the stairs, **always make sure to grip the outer stringer.** Gripping the step elements incorrectly could pose a crushing hazard to fingers. Any other use is considered improper and is not permitted.

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.

Preliminary information

- Check delivery for completeness. Check all parts for damage, sort out damaged parts if necessary.
- A 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.
- A 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).

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:

Natural, untreated	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). A The layer thickness of the veneer is 0.8 mm – this can be damaged if sanding is too strong!
Oiled	 Dirt can be removed with a dry towel. Please note that over time, oils are more strongly absorbed into the wood pore and evaporate. It is therefore recommended to reappy some oil in regular intervals. We recommend the following oil: Hesse Lignal NATURAL-OIL OE 52832 / (OE 83-2) colourless matte.
HPL-Surface coating	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-abra- sive cleaning agents.

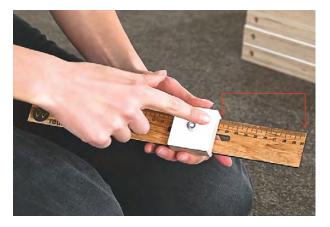
Disposal

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

Setting your slope ruler

Klapster Slim and Klapster Ultralight have a variable rise system that allows you to set all slope dimensions between 18.6 and 24 cm. When you placed your order, the individually suitable slope and number of steps were already determined depending on the floor height you specified.

Take your individual slope measurement from your order confirmation or your configuration document and set the slope ruler accordingly.



1 Read off the slope measurement on the righthand side of the white multiplex block.



② Then tighten the screw until the multiplex block can no longer be shifted during the assembly of the staircase.

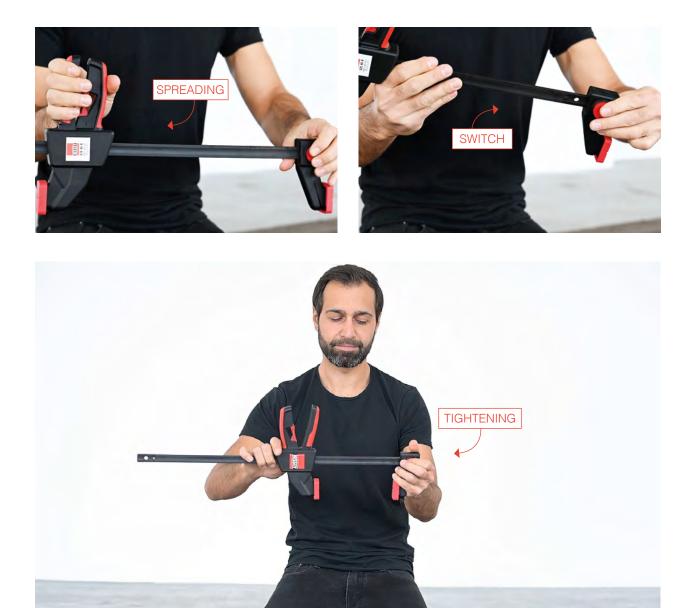


Operating the Bessey one-handed clamp

The Bessey one-handed clamp is used to connect the stringer pieces of Klapster Slim and Ultralight to each other.

When delivered, the clamp is set to **tighten.** By operating the release lever integrated in the handle, the sliding bar can be moved along the rail in order to be able to attach the clamp to the desired positions of the stringer pieces. By operating the pump lever, the red plastic jaws are moved towards each other.

By repositioning the upper part, the clamp can also be easily and quickly switched to **spreading**. To do this, turn the red lock of the upper part with the lock symbol to unlock the clamp. Then put the upper part on the other side of the rail so that the red plastic jaws no longer point towards each other but in opposite directions. Lock the upper part again and operate the pump lever to move the jaws apart.



Tools to be provided on Site



- Cordless screwdriver
- □ Hammer/rubber mallet (not staining)
- □ Folding ruler
- Pencil
- □ Allen key/Allen attachment for cordless screwdriver (attachment size 5 mm)
- □ Spirit level/straight edge
- Saw (Japanese saw or hand-held circular saw)
- □ Open-end wrench with wrench size 10

- □ (Wood) drill bits 6 mm, 5,5 mm and 2-3 mm
- Countersink
- □ Angle
- □ Fleece or similar underlay
- Cutter or scissors
- Screws, e.g. 6 × 100 mm, for wall mounting and if necessary 2 more for the ceiling angle (matching the wall texture)
- For stone or concrete walls: masonry drill and matching dowels

Klapster delivery content



- 1 Steps (quantity as per order confirmation)
- 2 Stringer pieces (2 per step + 1 additional)
- 3 Slope ruler
- 4 Spacer sleeves (4 per step)*
- 5 1 Pivot fitting
- 6 Axle bolts (2 per step)* ULTRALIGHT: 6 × 120 mm SLIM: 6 × 150 mm
- 7 Brass bushes (2 per step)
- 8 Screws for the spacers 3 × 16 mm (2 per spacer)*
- 9 Mounting screws for the pivot fitting 5×25

- **10** 1 Short axle bolt with nut screwed on (M6)
- 11 1 Soap
- 2 Magnets with thread
- 13 3 Magnet screws 6,3 × 50 mm (with spacers ≥ 3 cm only one)
- 14 Spacer (3-5, depending on number of steps)
- 15 Bessey one-handed clamp, EZS 45-8

* The scope of delivery includes additional spare parts

Installation instructions

Assembly Klapster Ultralight/Klapster Slim





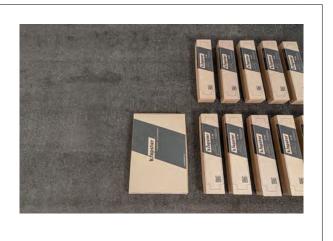
For support we also recommend the installation video in the download section of our website! https://www.klapster.de/en/montage

Unpacking

1

2

Open the packages and **check the delivery content** using the assembly instructions. Spread out all components on a clean surface (e.g. on a protective sheet, carpet or cardboard).



Check brass bushings

The brass bushes are already placed inside the steps. Please check that the brass bushes are correctly located in the drill holes in all steps.

On the Klapster SLIM model, the brass bushes sit **slightly deeper in the drill hole**, on the Klapster ULTRALIGHT model, the brass bushes **protrude a little from the drill** hole on both sides.





Spacer sleeves

Attach **4 spacer sleeves** per step. Tap them in with a rubber mallet.





4

5

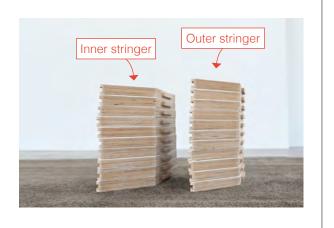
The stringer parts are already pre-soaped. To simplify the assembly of the stringers, apply additional **soap** to the **positive shaping** of the dovetail joint.



Stack stringer pieces

Make two equal-sized stacks with the stringer pieces.

Place the **last**, additional stringer piece (from the accessory package) **on top of one of the stacks.** The stack with the additional stringer will become the outer stringer, the smaller stack will become the inner stringer. You can put the larger stack aside for the time being. You start with the lower stack.



Assembly of the inner stringer

6

7

All stringer elements have a groove (milled recess) on one side and a tongue (positively shaped form of the groove) on the other side, via which several stringer elements can be joined together.

Take **two stringer elements** of the **inner stringer** from the stack. Position the groove of the first part at the lower end of the tongue of the second part. Slide the stringer pieces into each other until you feel resistance.



Inserting the slope ruler

Insert the slope ruler which has been preset to your individual slope into the drill hole at the base of the lower stringer.

 \Rightarrow See page 8 on how to set your slope ruler.





8

9

Position the one-handed clamp

To connect the stringer elements completely, use the Bessey one-handed clamp (see operating instructions for Bessey tool on page 9).

First place the clamp on the **diamondshaped cut-outs** of both stringer pieces and operate the pump lever (tightening).



Change the position of the one-handed clamp

Reposition the clamp. Place the clamp on the **downward-opened part of the lower stringer element** and the cut-out of the upper stringer element and operate the pump lever (tightening).

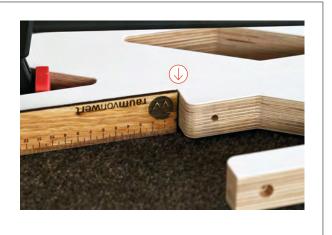


Set slope

10)

Using the one-handed clamp, press the stringer parts into each other until the foot of the upper stringer **rests exactly against the slope ruler.**

If the ruler is under **too much pressure**, you can use the clamp to **slightly push the stringer pieces apart again** (spreading).





(12)

Place a mark

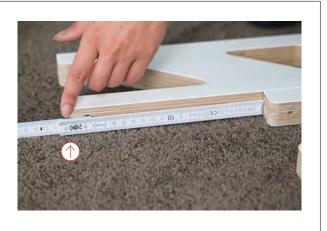
Remove the slope ruler. Mark the final position of the stringers with a pencil.



Check measurement with a folding ruler

This measurement must match your individual slope measurement.

 \Rightarrow The exact positioning of the stringers is essential to ensure the later function of the folding staircase.





Repeat

Connect all the components of the inner stringer in this way using the one-handed clamp and your slope ruler.





15)

Assembly of the outer stringer

Take the **components of the larger stack** with the additional stringer part. Connect the stringer elements according **steps 6 to 13** until the outer stringer is also completely assembled.

Then put the outer stringer temporarily aside.



Check the markings

Make sure that the **positions of all pencil marks along the stringers** remain unchanged.

In case of deviations, the exact slope must be readjusted.

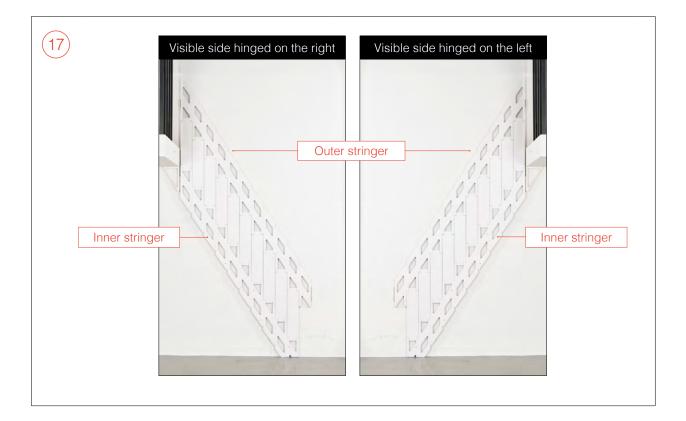


16 Define visible side

In the following phase, the steps will be mounted on the inner stringer. For this, the later **visible side** (i. e. the side of the staircase that will later face into the room) must **be oriented upwards.**

To position the inner stringer with its visible side up, **place yourself on the pointed side** of the inner stringer and raise it up.



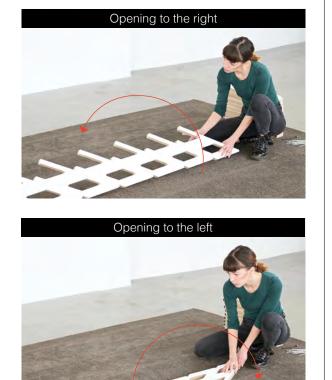


Position the inner stringer

(18)

Do you want your staircase to be hinged **on the right and folded out to the left?** Now place the inner stringer on the **RIGHT** side.

Do you want your staircase to be hinged **on the left and folded out to the right?** Now place the inner stringer on the LEFT side.





20

21

Insert step

Insert the first step on **the opposite side** of the stringer tip.



Take note of the drill holes

⇒ Make sure that the steps are correctly aligned.

The drill holes of the grub screws that are visible on one side of the steps **must point downwards** for further assembly (i. e. they must be on the non-visible side).



Consider the gap dimension

⇒ Make sure there is an even gap of 1.5 mm between the step and the stringer legs.



Mount the first step

(22)

 $\left(23\right)$

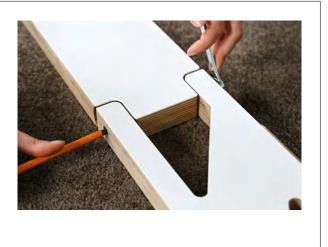
24

Use the single, **shorter axle bolt with the nut screwed on to install the first step.** Unscrew the nut and insert the short axle bolt into the drill hole of the stringer element.



Tighten the screw

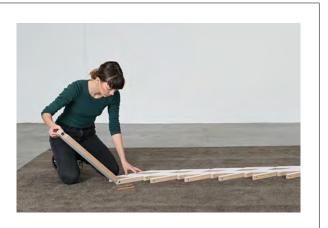
On the opposite side, screw the nut back onto the axle bolt and tighten the nut using a spanner (size 10) while securing the head of the axle bolt with an **allen key**.



Control step resistance

Tighten the screw with the nut until you can lift the step with **light to moderate resistance**.

 \Rightarrow Then continue with the second step and one of the normal axle bolts.





ATTENTION

The axle bolts must be tightened with a maximum torque of 2 Newton metres and must not turn loose.

If the torque is higher, the stability of the stairs is at risk!



(26) KE

KEEP A DISTANCE

Only use the cordless screwdriver **until the** screw head is just before the drill hole!





(27) USE AN ALLEN KEY

The last turns must be made with an allen key to avoid over-tightening the screw.





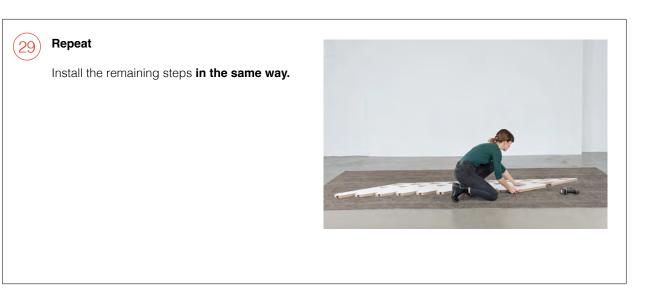
Control step resistance

(28)

Check whether there is sufficient resistance by lifting the step after each tightening.

If the step is difficult to move in the stringer section, **you can slightly loosen the screw again with the allen key.** If you do not feel any resistance when lifting the step, further tighten the screw with the allen key.

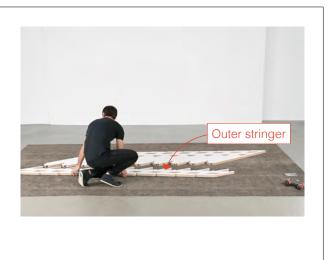




Arrange outer stringer

(30)

Now get the **outer stringer** ready.





32

33

Cut strips

To be able to mount the outer stringer, prepare the stairs for folding up the steps as follows:

Cut several **approximately 5 cm wide strips** from your shipping box and divide them into **at least as many pieces as you have steps.**



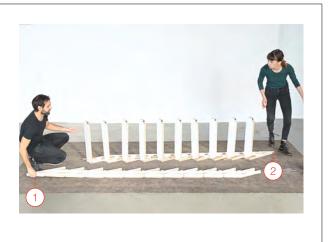
Insert cardboard pieces

Set up the steps while tucking the pieces of cardboard **between the stringers and the steps**.



Assembly of the outer stringer

The **tip of the outer stringer (1)** is on the opposite side of the **tip of the inner stringer (2),** i. e. the outer stringer must point in the opposite direction of the inner stringer.



34 Lift the outer stringer

Lift the outer stringer **with two people** and press the first, last and middle step into the stringer elements. Then connect all the other steps to the corresponding stringers.

No step is inserted into the lowest stringer element of the outer stringer (stair foot).



Insert axle bolts

35

Insert the remaining axle bolts. While doing this, check again the **unchanged posi-tion of your pencil marks** along the outer stringer.

NOTE: In order to be able to insert the axle screws, the drill holes of the stringers must be aligned with the drill holes of the steps. Slightly moving the stringers, if necessary, will help you to adjust the exact position.



Tighten the screws

Tighten all screws according to steps **24 to 27.**



36

Mind 2 Nm torque and don't forget the allen key!





38

Cut the tip of the inner stringer to your individual first step height

See order confirmation or configuration document.

Position yourself at the end of the staircase where the additional stringer (without step) is mounted. Before transferring the first step slope dimension to the stringers, use an angle to ensure that the staircase is aligned at a **90° angle.**



Mark the cutting edge

Measure from the **top edge of the step down the stringer element** with the help of your **slope ruler** and mark your bottom step measurement on the stringer with a pencil.



39 Use an angle

Use an **angle** to mark the **cutting edge**.





(41)

42

Repeat

Repeat the process on the inner stringer.

 \Rightarrow Again, make sure the stair is aligned at a 90° angle.



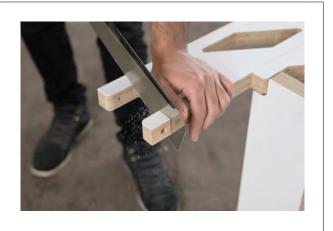
Mark the cutting edge

Measure from the **top edge of the step** (not from the end of the stringer!) towards the **tip of the stringer.** An angle can assist with this.



Saw off the outer stringer

Saw off the **outer stringer** at the marked cutting edge (Japanese saw or hand-held circular saw).

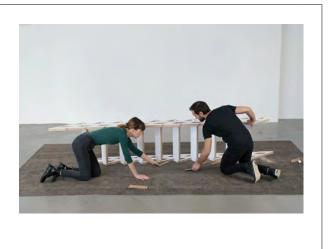




(44)

Remove cardboard pieces

Remove the pieces of cardboard between the **inner stringer** and **the steps**.



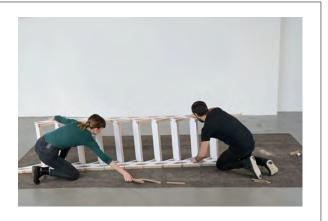
Fold up the inner stringer

Now lay the staircase **flat first (visible side up)** in order to then be able to fold the inner stringer upwards.



45 Insert cardboard pieces

Again, place a few pieces of cardboard **between the steps and the outer stringer.**





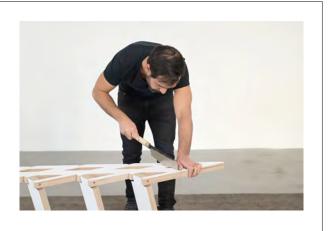
47

48

Saw off the inner stringer

Saw off the **inner stringer** at the marked cutting edge (Japanese saw or hand-held circular saw).

Lay the staircase flat again (visible side up).



Preparation for wall mounting

Distribute the spacers (6 mm thin stringer pieces) evenly or depending on your wall construction on the inside stringer.

Place one **spacer at the shortened first step stringer**, another one at the last step stringer and the rest at even intervals centrally along the inner stringer.

⇒ For wooden stud constructions or drywall, you must choose the position of the fixing points according to your wall construction (e.g. distance of the wooden studs).



Drill through holes

The spacers serve as **drilling templates** for the next step. Use an additional piece of wood or cardboard as a drilling pad.

Drill the holes for the wall installation through the **larger pre-drilled holes** of the spacers into the stringer **(6 mm drill bit).**

Do not screw the spacers to the staircase at this point already!





Countersink drill holes

Then remove the spacers and **countersink the drill holes** according to the screws you intend to use for wall mounting.





Turn the staircase around to now have the wall side facing upwards instead of the visible side.



Screw on spacers

51

Reposition the spacers at the same places on the inside stringer (drill holes must be congruent.

 \Rightarrow Screw the spacers onto the stringer.

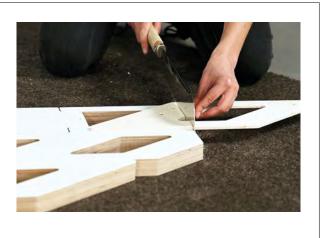
Use the small pre-drilled holes in the spacer and the **3 × 16 Spax screws** supplied.





Saw off the bottom spacer

Shorten the spacer at the **lowest stringer**. Saw off the protruding part with a Japanese saw or hand-held circular saw.



Preparation for wall mounting

Once all the spacers have been screwed to the stringer, the staircase is ready for wall mounting.



(53)

When carrying the stairs, make sure to **transport them vertically.** This reduces the impact on the stair structure and prevents it from folding out unintentionally.

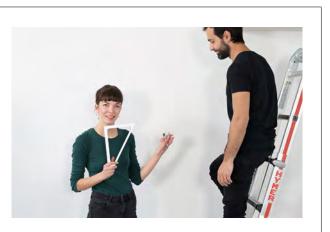


Ceiling angle

54

If included: First mount the ceiling angle.

In case of ceiling thicknesses below **30 cm**, the angle connects the top inner stringer and the ceiling and ensures optimum load transfer.





(56)

57

Align the ceiling angle

Align the ceiling angle with the help of a spirit level and screw it **underneath the ceiling with two screws.**

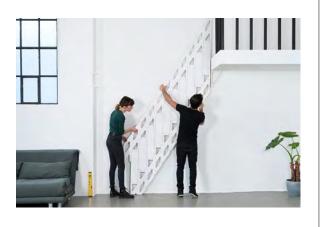


Position the staircase

Align the stairs with the wall and ceiling with at least two people.

Be sure to also use a **spirit level** for this. Place it on the face of the lowest element of the outer stringer (stair foot).

Please note: In order to be able to mount the staircase on the wall, skirting boards or mouldings may have to be removed at the mounting location. Alternatively, the staircase must be screwed to the wall with spacers of the same thickness as the skirting.



Parallel alignment

The staircase is correctly positioned when the highest step and stringers are aligned **parallel to the ceiling** and the sawn-off first step stringer is resting **completely flat on the floor.**





(59)

(60)

Fine-tuning

A **spirit level** can be used to fine-tune the position of the stairs.

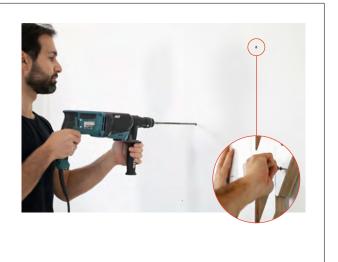
Place the spirit level on the front end of the outer stringer.



Mark drill holes

Wooden stand constructions: go on to point 60.

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.



Wall mounting

Screw the stairs to the wall. Tighten all screws lightly **before tightening them** evenly.

Screws should be selected according to the masonry.



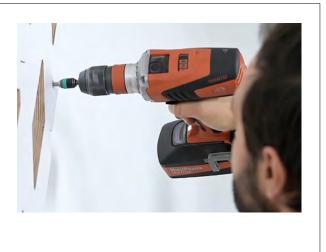


62

(63)

Screw flush

The screw heads should be screwed in flush.



Installation of the pivot 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 upper end of the outer stringer** and the ceiling (see photo).



Align pivot fitting

It is important that the **entire surface** of the **pivot fitting rests on the face of the ceiling.** With thin ceilings or beams, the fitting can be pushed up to the beginning of the groove in the stringer piece.





(65)

66

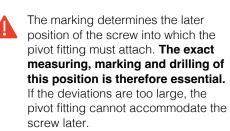
Place two marks

There is a mark on the **side of the pivot fitting.** Use a pencil to **transfer the mark** to the **front of the ceiling and the stringer**.



Position of the pivot fitting screw

Fold up the stairs. 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.





Drill the fastening hole

Depending on the ceiling condition pre-drill the fixing hole at the marked position.

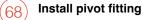
Stone or concrete ceilings: Insert a dowel that matches the screw of the pivot fitting.





Screw in one of the magnet screws

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

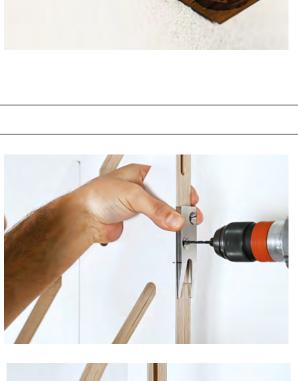


Reposition the pivot fitting at the mark you have set on the stringer (see 64).

The exact positioning is crucial! Mount the pivot fitting on the outer stringer, pre-drill holes with a small drill (e.g. 2-3 mm) and then screw the pivot fitting to the front of the stringer with the **Spax** screws (5 × 25).



The **countersinks** of the holes in the suspension fitting must **face out-wards**.





Adjust the screw in the ceiling

(69)

Unfold the staircase and check that the screw for the **pivot fitting is positioned** almost without slackness in the legs of the suspension fitting.

This is the case if no gap is visible between the fitting and the ceiling when the staircase is completely unfolded.

The slackness can be adjusted by screwing the screw further in or out.

The outer stringer (pivot fitting) must **not sit too tightly** on the screw.

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 screw.



Install the magnets

70

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

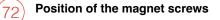




Attach magnets to the outer stringer

Screw in the pot magnets.





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.



Set magnet screws

73

Depending on the wall condition, 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 until flush.



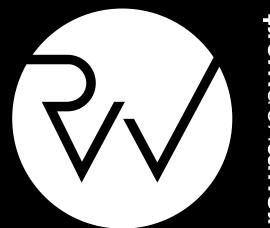


Klapster – Do it Yourself.

Do you have any comments on our instructions or would you like to give us feedback after installation?

We look forward to your feedback! info@klapster.de

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



raumvonwert

raumvon**wert** GmbH Gwinnerstraße 46 60388 Frankfurt am Main Germany

Tel: +49 69 153201180 info@klapster.de