

Assembly Instructions – Construction Staircase 2x Quarter-Turn, 2x Quarter-Turn with Landing

1. Preparation for Installation

Before starting the installation, it is crucial to study the floor plan of the staircase thoroughly and check the ceiling opening as well as the dimensions against this plan.

Pay close attention to the structure of the walls and ceilings, as well as the available space at the stair exit. Additionally, verify the completeness of all staircase parts, unpack them, inspect them, and familiarize yourself with their position in the stairwell. Proceed in the same manner with the fittings and assembly accessories.

Ensure that the assembly tools and all required aids are ready. Before beginning the installation, read the entire text carefully to gain a theoretical understanding of the complete sequence.

Recommendations and Screwing Note

- **Personnel:** It is recommended to carry out the installation with at least two people, ideally three or four.
- **Screwing Recommendation:** Before driving a Spax screw into a pre-drilled hole, always apply a small amount of silicone (approx. 2 pea-sized drops) into the hole. This facilitates driving the screw in and reduces the risk of it breaking if overtightened.

2. Anchoring the Outer Stair Strings

The installation begins by anchoring the outer stair strings to the wall. The anchoring holes must be carefully planned and drilled to avoid collisions with electrical installations, niches, and other wall openings.

Aim to place the first anchor point as close as possible to the stair ascent — ideally approx. 6 cm below the centre of the housing of the first step. For the exit, choose a point usually below the last or second-to-last tread and ensure that it does not touch the insulation layer in the ceiling. Place the next anchoring point as close as possible to the corners of each string.

For the subsequent anchoring points between those already established, place them ideally approx. every two rises, again approx. 6 cm below the centre of the step housing. If the staircase features a landing, it is recommended to place two anchor points under the landing on each section.

If the walls of the staircase use a grid construction method — meaning they feature reinforcements and studs behind plasterboard or OSB panels — it is imperative to adjust the anchor points and place them exactly onto the centres of the reinforcements. Do not skimp on their number; you can even place two anchor points one above the other.

Important Protection: Despite these precautions, we strongly recommend always supporting the strings in the outer corners with permanent supports from the e-shop range. This ensures that the staircase does not sink over time and guarantees long-term stability.

3. Pre-assembling the Exit Components

The (second to) last tread is pre-assembled onto the 3rd outer stair string by securing it with 2 Spax screws driven from above through the string. Before this step, apply PUR construction adhesive onto the string surface and into the holes for the dowels in the tread. The tread is then fitted onto the dowels, tapped firm with a rubber mallet, and screwed tight with 6x80 Spax screws.

Subsequently, connect the 3rd inner stair string to this assembly in the exact same manner. The anchor plate (apron) is also coated with adhesive, placed onto the dowels, and fixed with screws to the front faces of both strings while also being screwed to the rear edge of the tread.

Summary: The exit structure now consists of the anchor plate (which also serves as the final riser), the last tread, and both exit strings (inner + outer).

4. Aligning and Connecting the Outer Corner Sections

Now take this pre-assembled exit structure and, with the outer stair string, place it against the wall, press it into the corner and towards the exit edge, support it, and align it. The upper edge of the anchor plate (apron) should sit lower than the final floor height of the upper floor by the thickness of the future floor covering.

Carefully check that the (second to) last tread is level. Keep in mind that a common problem is the lack of flatness of floors at the stair exit, even with screed floors! To temporarily secure the structure, it can be provisionally anchored in the correct position, but it should not be permanently tightened yet.

Next, glue the dowels in and screw the threaded rods into the 2nd outer string to connect the strings together in the 2nd outer corner. Coat the joint with adhesive, preferably the front face of the 2nd outer string.

Subsequently, slide this string onto the dowels, align it to the corner, press it against the wall, support it, and adjust it. Push the pre-assembled threaded rods in this string with your fingers into the hole on the side of the string, and then screw them into the drive-in nuts in the 3rd outer string by at least 4 full threads.

Tip: This step requires a certain level of intuition, practice, and precise positioning of the parts relative to each other. We recommend trial-screwing these threaded rods into the drive-in nuts beforehand (at the very beginning of the installation) and, if necessary, correcting the rectangular alignment and ensuring the threads engage smoothly.

Then, screw the collar nuts onto the ends of the threaded bolts (in the side holes) and tighten the corner connection firmly.

4.1 Assembly of the 1. Outer Corner

Following this, glue the dowels into the 1st outer stair string and screw the threaded rods into the 2nd outer string to connect the strings in the 1st outer corner. Coat the joint with adhesive, preferably the front face of the 1st outer string, which serves as the ascent string.

Subsequently, slide this outer ascent string onto the threaded rods and dowels, align it to the corner, press it against the wall, support it, and adjust it. Screw the collar nuts onto the threaded rods (in the side holes) and tighten the corner connection firmly.

If the floor heights are not final, use suitable shimming plates to ensure that the stair strings sit at the correct height. Check the height of the step supports on the strings and correct them if necessary.

Subsequently, firmly anchor all outer stair strings to the walls at all points and the anchor plate to the ceiling, and now tighten them securely. Care must be taken to ensure that the stair strings do not warp or copy the unevenness of the wall. Use suitable packing material to ensure a flat surface.

Important Geometric Note: The delivered staircase is manufactured to be exactly rectangular in its floor plan. Therefore, in case of deviations from a right angle at the corners or at the exit, the stair strings (anchor plate) must be shimmed accordingly so that they stand exactly rectangular to each other after anchoring. Otherwise, the corner steps, the landing, and the inner stair strings cannot be installed correctly.

At this moment, all three outer strings are anchored to the wall, and the anchor plate is fixed at the exit, to which the third inner string — the exit string — is connected on the inside. It is important to note that this inner string is only loosely supported in the 2nd inner corner and stands freely without anchoring.

5. Connecting and Stabilizing the Inner Stair Strings

Following this, glue the dowels into the 1st inner string (ascent string) to connect the strings in the 1st inner corner. Coat the joint with adhesive, preferably the front face of the ascent string. Subsequently, slide the 2nd inner string onto the dowels and secure the connection using two Spax 6×100 screws.

Now connect this assembly in the 2nd inner corner to the already mounted 3rd inner string to form a single unit. The procedure is the same as for the 2nd inner corner.

This corresponds to the following process: glue the dowels into the 2nd inner string to connect the strings in the 2nd inner corner. Coat the joint with adhesive, preferably the front face of the string. Slide the assembly with the dowels into the openings in the 3rd inner string and secure the connection with two 6×100 screws.

5.1 Aligning and Anchoring the Inner Base

Properly support and align the inner stair string assembly (just as previously done with the outer side) in all planes. To better check the relative distance between the outer and inner strings, we recommend provisionally mounting one tread before each corner, another directly behind the corner, and also tread No. 2. Always verify that they are level.

Once everything is correct, firmly anchor the inner ascent string to the floor below the first tread using a metal bracket, Spax screws for the strings, and a floor anchor. Take note of the possible presence of underfloor heating!

6. Installing Riser No. 1

Now screw riser No. 1 to the front faces of both ascent strings, ensuring that you do not forget the adhesive.

7. Progressive Installation of Treads and Risers

Next, the treads and risers are installed step by step from the ascent up to the exit:

1. Apply adhesive evenly to the rear edge of **tread No. 1** and attach the correctly aligned **riser No. 2** by screwing it tight with three Spax screws (5×45).
2. Subsequently, apply adhesive into the half-groove at the front edge of the tread, into the holes for the dowels, and onto the corresponding support surfaces of the tread and riser on the inner and outer string.
3. Place the entire component (**tread and riser**) onto the dowels and against the protruding edge of **riser No. 1**. Tap it firm with a rubber mallet and screw it to the string using four 6×80 screws.

4. Finally, tighten **riser No. 1** into the half-groove on the front edge of **tread No. 1** using 3 Spax screws (5x45).

Repeat this exact process for **tread No. 2 and riser No. 3**, progressing step by step up to the exit.

Note on the Final Step: It is important to note that the last tread was already installed in the previous step. Therefore, you cannot simply place this final section of the previous tread and riser onto the dowels together, as the front edge of the last tread is in the way. For this reason, it is necessary to first install only the riser, and then install the tread separately.

8. Curing Time and Completion

This completes the entire installation of the **Construction staircase**. The glued connections require approximately **24 hours** at normal room temperature to cure completely. Do not subject the structure to loads during this period.