

Assembly Instructions – Steel Staircase

1x Quarter-Turn, 1x Quarter-Turn with Landing

1. Preparation for Installation

Before starting the installation, study the floor plan of the stairs carefully. Check the ceiling opening and all specified dimensions against the plan. Pay particular attention to the wall and ceiling structure as well as the available space at the stair exit.

Subsequently, check the completeness of all stair parts. Unpack them, check them for damage, and get an overview of their arrangement in the stairwell. The same applies to all fittings and auxiliary installation materials.

Now prepare the required assembly tools and all necessary aids. Read through the entire assembly instructions carefully so that the sequence is completely clear before starting.

Recommendation

The installation should be carried out by at least three people, preferably four. The metal parts are large and heavy. Otherwise, handling them carries a risk of injury as well as a risk of paint damage.

Connection of the Treads

The connection of the treads to the stair strings is done via screws through the plates under the treads. To prevent squeaking, a thin, transparent plastic underlay must be inserted at each screw point between the tread and the plate. These underlays are self-adhesive and are attached to the plates under the treads during installation preparation. Protruding parts, frequently at the corners, are cut off cleanly.

2. Fastening the Outer Stair Strings

The installation begins with fastening the outer stair strings to the wall. The drill holes are already prepared. However, before installation, check whether these holes collide with installations, niches, or wall openings.

If a collision occurs, drill a replacement hole manually. This should be as close as possible to the original drill hole.

If the walls in the stairwell are built using a grid construction method (e.g., with reinforcements or posts behind plasterboard or OSB panels), the fastening points must be adjusted accordingly. Set the screws exactly into the centres of the reinforcements. Do not skimp on fastenings — two screws one above the other are also permissible.

It is recommended to apply a rubber membrane between the plasterboard wall and the metal stair string. This reduces vibrations and protects the surface.

Despite these measures, it is strongly recommended to permanently support the stair strings at the outer corners, for example, with the supports offered in the shop. This prevents the staircase from sinking over time.

The sequence of installing the stair strings results from the respective position of the connection plates.

3. Aligning and Connecting the Outer Stair Strings

Place the first outer stair string against the wall, align it into the corner or towards the stair exit, support it, and level it. Subsequently, attach the second adjacent outer stair string from the corner and connect both strings with screws.

Align the stair strings at the stair ascent and at the stair exit to floor level. If the final floor height has not yet been determined, use suitable shims to set the strings to the later floor height.

Check the flatness of the plates under the treads and level them if necessary. Unevenness in the floor area of the stair ascent or descent occurs frequently — even with screed floors.

Once both strings are correctly aligned, fasten them at all intended points and tighten the screws firmly.

Attention: The stair strings must not adapt to wall unevenness or become wavy. Use suitable shimming material to level out unevenness.

Important Note: The delivered staircase is manufactured to be exactly rectangular in its floor plan. If the existing construction corners deviate from a right angle, the stair strings must be shimmed accordingly so that an exact right angle is created after fastening. Otherwise, a correct installation of corner treads, landings, and inner stair strings is not possible.

Tip: For a simple and secure joining of the corner connections, it is recommended to temporarily replace one of the short connection screws with a short piece of threaded rod. This is screwed into the blind hole of the string or the connection plate and serves as a guide pin.

4. Installation of the Exit Treads and the Inner Exit String

First, mount the narrow exit tread onto the outer exit string. Fastening is done with screws through the support plate under the tread. At the same time, the tread closest to the corner is mounted. This is fastened to both outer exit strings.

Subsequently, attach the inner exit string to these two mounted treads, screw it, and support it. Tighten the screws of the two treads firmly at the plates of the outer stair strings. At the plates of the inner string, however, the screws are only loosely screwed in, leaving a few thread pitches free.

Attention: The inner exit string must not yet be fixed at the exit via the vertical fastening plate. This connection remains open for now. The existing mobility of the string significantly facilitates the connection with the next inner string as well as the further installation of the treads.

5. Connection of the Inner Stair Strings

Align the free end of the inner stair string in the corner to the correct height, stand it up, and connect it to the ascent string. Screw the two strings together in the corner via the connection plate and tighten the connection firmly. The support or supports remain in place and must be secured against slipping for the duration of the further installation.

If the final floor height has not yet been determined, use suitable shims to already set the stair string to the later floor height.

Tip: Depending on the situation (dimensions, weight of the components, and number of installing persons), the inner stair strings can first be pre-assembled outside the construction opening. This unit can then already be installed together in **Step 4**.

6. Installation of the Treads from the Stair Ascent

Now mount tread No. 2 at the stair ascent. First, fix the tread from below with two screws to the tread plate of the outer string.

Attention: To the plate of the inner string, the tread is only loosely fixed with a few thread pitches. If the connection were tightened firmly right away, it would complicate the installation of the subsequent treads. Repeat this procedure from tread No. 3 up to the exit. The intentionally left clearances avoid paint damage to the string.

6.1 Installation for Stairs with Risers (Modification to Step 6)

For stairs with risers, step 6 is modified as follows:

1. Apply neutral silicone as a bead onto the front surface of **riser No. 3**, 2 cm parallel to the bottom edge (at the height of the pre-drilled holes). Place the riser against the rear edge of **tread No. 2**, align it, and fasten it with three screws 5x45. Wipe off excess silicone.
2. This assembly (**tread No. 2 + riser No. 3**) is mounted at the ascent: first fix the tread to the outer string from below, and loosely fix it to the inner string.
3. Subsequently, connect **tread No. 3** with **riser No. 4**; additionally, now apply slow-curing construction adhesive into the groove of the riser at the front edge of the tread. Spread lightly.

Tip: After application, the adhesive begins to foam slowly or increase in volume. To ensure it does not squeeze out of the joint later, apply thin beads of neutral silicone to both side surfaces of the groove — they form a sealing barrier.

Repeat this procedure from **tread No. 4** up to the exit. Already mounted corner treads must be adjusted accordingly, and always use silicone and adhesive. The left clearances prevent paint damage to the string.

7. Final Alignment of the Inner Stair String

After all treads (with the exception of the first tread) are mounted, now finally tighten the screw connections to the inner stair string.

Subsequently, check the height at the stair exit, the alignment in the inner corner, as well as the entire stair construction. Make corrections if necessary.

8. Final Fastening of the Inner Exit String

Now perform the drill holes for fastening the inner exit string through the vertical connection plate and subsequently screw the string tight.

If a final exit riser is provided, its installation may only take place now. The installation is carried out according to **Step 6.1**.

9. Fastening of the Start

Now mount the start. To do this, first insert tread No. 1 for a trial ("dry run") and tighten all four screws on both stair strings.

Subsequently, align the inner stair string exactly vertically. This alignment is important because the later start post must also stand vertically.

Afterwards, mark the drill holes in the fastening plate on the floor. Demount tread No. 1 again, drill the marked holes, and subsequently screw the fastening plate firmly to the floor.

10. Final Assembly of the First Tread

Mount tread No. 1 again and tighten all screw connections firmly.

10.1 Final Assembly for Stairs with Risers (Modification to Step 10)

For stairs with risers, step 10 is adapted as follows:

1. Apply slow-curing construction adhesive into the groove of the riser at the front edge of **tread No. 1**, where **tread No. 2** is already mounted. Spread the adhesive lightly.
2. Insert **riser No. 1** into the groove of tread No. 1, press it on, and tap it in carefully if necessary. Subsequently, carefully insert this assembly into the stair construction and tighten **tread No. 1** firmly. If required, shim the riser accordingly.
3. Subsequently, apply neutral silicone as a ca. 2 cm wide bead parallel to the bottom edge onto the front surface of **riser No. 2**.
4. Carefully insert the riser from below into the groove of **tread No. 2**, press it against the rear edge of **tread No. 1**, align it cleanly, and fasten it with three screws (5 × 45 mm). Remove excess silicone.

11. Final Inspection

Carefully check all connections and fastenings of the staircase and subsequently tighten them definitively.

12. Installation of the Balustrade Posts

The balustrade posts are numbered and are mounted in the intended order.

First, guide the screw through the stair string. Subsequently, put on the stainless steel washer, with the flat side resting on the stair string. After that, the attachment is inserted. This rests with the straight side on the washer and with the cut-out side against the post.

Now set the post in place, turn the screw into the thread of the post, and tighten it only lightly at first. Repeat this process for the second screw connection of the post.

Mount all balustrade posts one after another in this manner, align each post exactly vertically, and subsequently tighten both screws firmly.

13. Pre-assembly of the Second Upper TVH Rod of the Balustrade Infill

Prepare the second upper TVH rod of the balustrade infill for pre-assembly. To do this, loosen the grub screws of the corresponding holders. If necessary, the grub screws can also be removed completely. These are M5 screws, which are loosened with a 2.5 mm Allen key.

Loosen the second grub screws of the holders far enough so that the TVH rod can be guided through easily without being damaged. Align the TVH rod correctly, insert it into the holders, and measure the overhangs. Correct these if necessary and subsequently fix the rod with the grub screws.

The pre-assembly facilitates the alignment and stability of the balustrade posts before mounting the handrail and at the same time creates sufficient space for using a cordless screwdriver during the further installation.

14. Installation of the Handrail

Mount the handrail onto the upper receivers of the TVH posts. The receivers can be tilted; the rod is height-adjustable via a grub screw (M6, 3 mm Allen key).

Align the handrail correctly, insert it into the receivers, and check the overhangs. Correct these if necessary and subsequently screw the handrail to the receivers.

Important: All screws must be pre-drilled before screwing.

Recommendation: Position all handrails first, secure them provisionally, and check the visual line, the height, as well as the overhangs. Only after that, pre-drill and screw the handrails definitively.

15. Installation of the Remaining TVH Rods and Finishing Work

After mounting the handrails, repeat the sequence from **Step 13** for all remaining TVH rods.

Subsequently, check the geometry of the entire balustrade and tighten all screws as well as grub screws firmly.

Close the hollow ends of the TVH rods with neutral silicone and insert the stainless steel caps. If necessary, the lower ends can be temporarily secured with adhesive tape until the silicone has cured.

16. Cleaning and Protecting the Staircase

Sweep the staircase thoroughly, clean all surfaces, and subsequently provide the staircase with the matching protective covers.

17. Completion of Installation and Curing Time

This completes the installation of the staircase.

All glued and silicone-sealed connections require approx. **24 hours** at normal room temperature to cure completely. During this time, the staircase should not be subjected to loads.