

Berlin Fitting Instructions

System staircase BERLIN - wire balustrade mounting instructions

Mount the staircase from the top downwards.

Each metal element has a variable setting option of up to 4 cm.

Before starting to mount the staircase, calculate the exact ascent height of each step. This can be done by dividing the ceiling height (top of floor to top of floor) by the number of ascents. Number of ascents = number of steps + 1.

Example:

ceiling height (floor to floor) = 252 CM

ascents (11 steps + 1)

$252 \text{ cm} / 12 = 21 \text{ cm}$

This is the ascents height of each step.

Mounting:

Measure from the top edge of the ceiling the calculated ascent height + a step thickness of 4 cm. (e.g. step thickness 4 cm + calculated ascent height 21 cm = 25 cm). This is the mounting height of the top element (Fig. 1). Attach the element with rawplugs and hexagonal head screws if the floor is made of concrete, and only with hexagonal head screws if the floor is made of wood. Before final mounting, check that the element has been positioned correctly, using a spirit level.

Now mount the other elements from the top downwards. Use the fitting (H) to make this easier. Attach the clamp (D) to the fitting and lower into the element (Fig. 2). When the elements have been clamped together remove the fitting (H). It is also used for the other elements.

Observe the calculated ascent height carefully (it may be a good idea to cut a piece of beading of the right length to measure with). If the ascent height is 185 -190 mm, turn the clamp (E) so the hole is at the top. But if the ascent height is 220-225 mm the hole must be at the bottom. It is important to clamp the elements together firmly, using the wrench (B1). Adjust the elements to suit the flight of stairs in question, using the assembly piece (I).

Fig.1

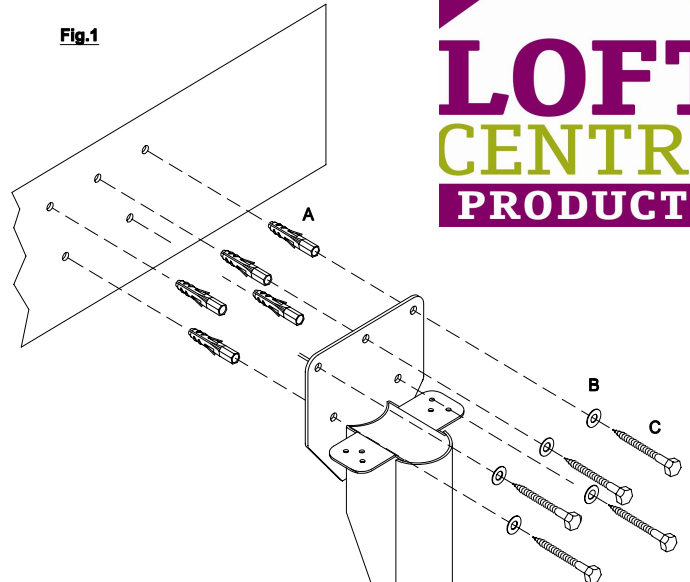
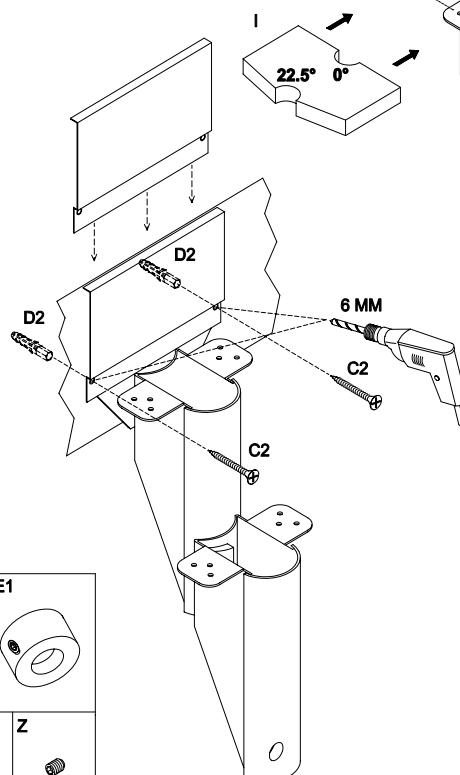
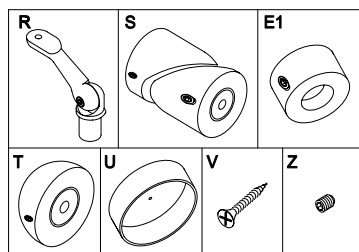
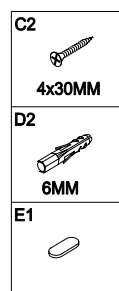
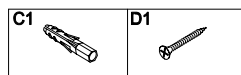
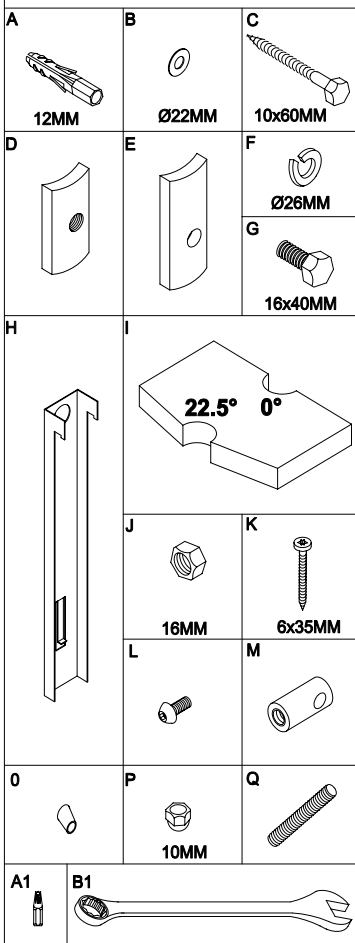
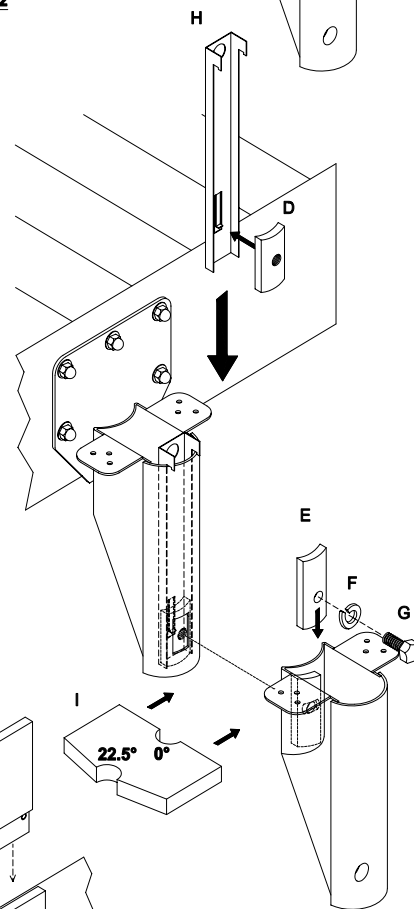
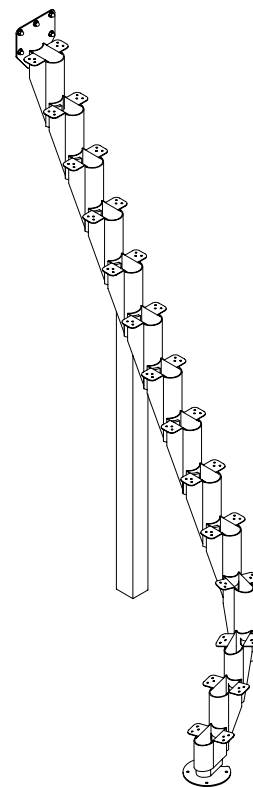


Fig.2



Support the elements which have already been mounted with a post (Fig.3).

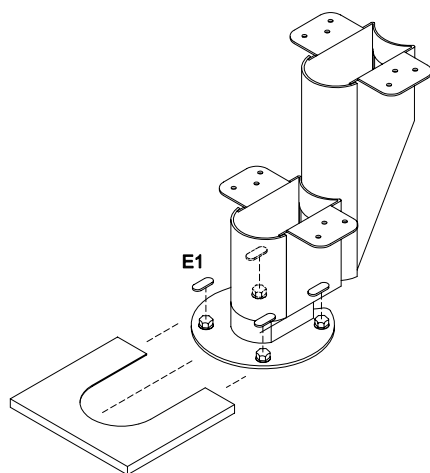
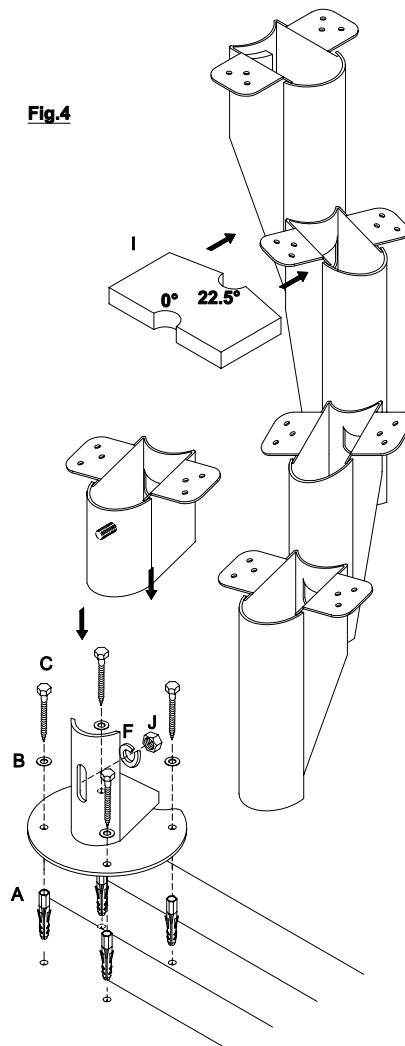
Fig.3



For quarter-newelled staircases, turn the 3 last middle elements and the bottom element 22.5°, using the enclosed assembly piece (I). The 5 first steps should then face the same way. If you choose this staircase design, care must be taken when using the staircase.

The staircase can also be mounted in a gentle curve. Fig. 14 shows 5 examples. Fix the floor element with rawlplugs and hexagonal head screws if the floor is made of concrete. If the floor is made of wood, mount the element with hexagonal head screws.

Fig.4



Mount the steps using torx-spax screws (K) and the enclosed bit (A1).

Place the steps on the support struts and mark them. It is important to mark them accurately to ensure that the steps have the correct position. Fig. 6 shows how to place the steps parallel on the element (same x dimensions), and Fig. 5 shows how the steps should be positioned in the middle of the element lengthways (same y dimensions).

After marking the steps, drill through them with a 3.5 mm drill to a depth of 35 mm. It may be a good idea to attach a stop device to the drill to prevent it from drilling all the way through.

Fig.5

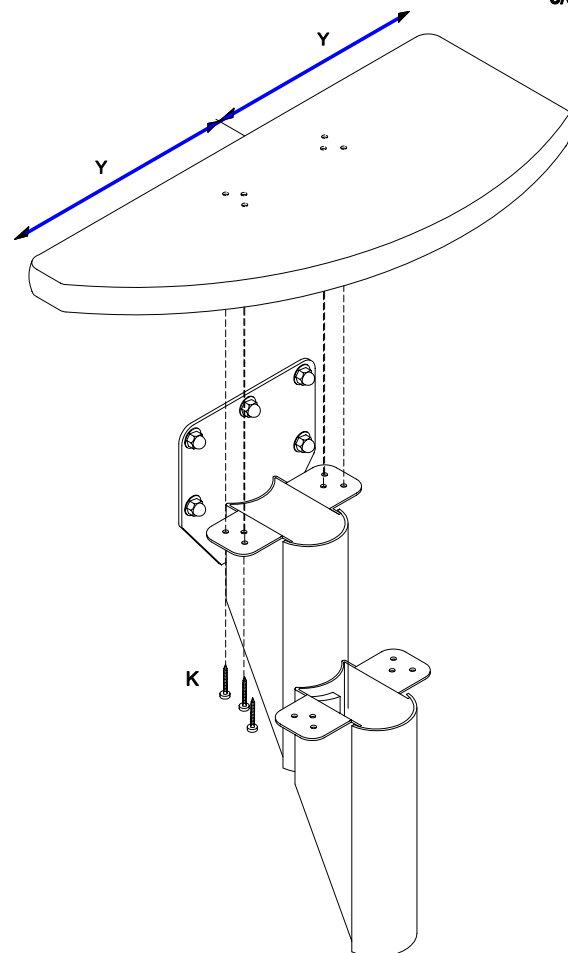
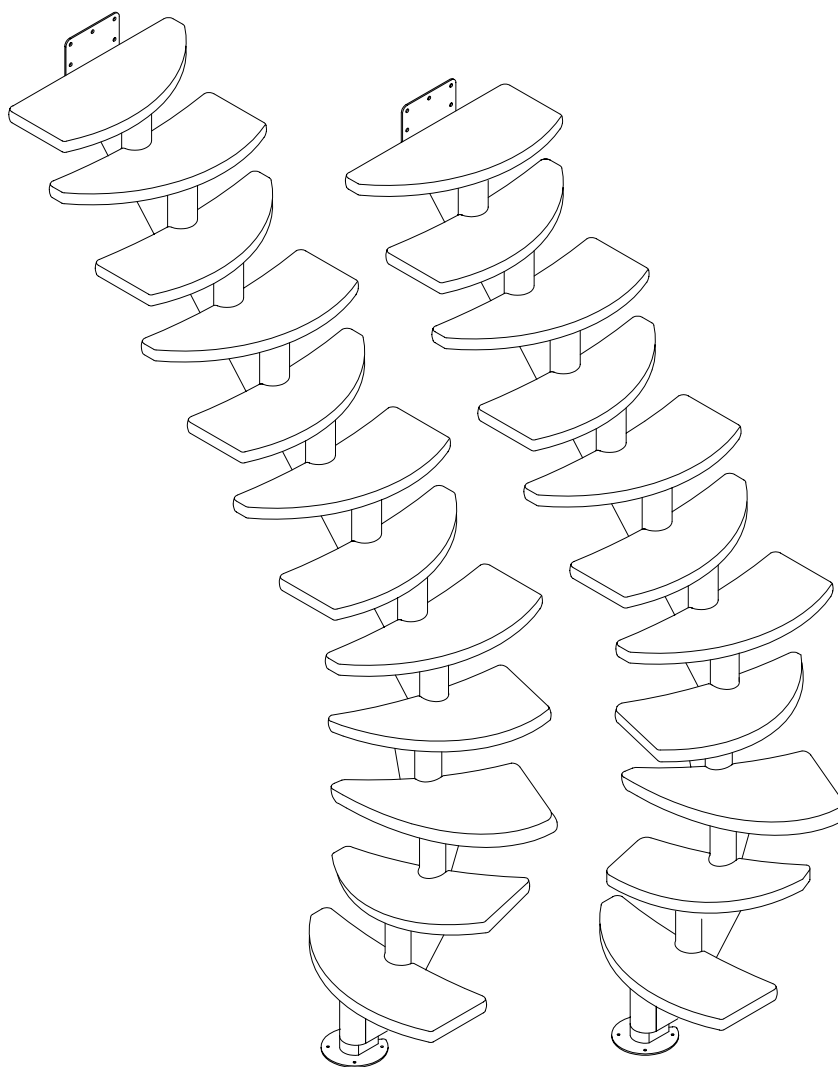
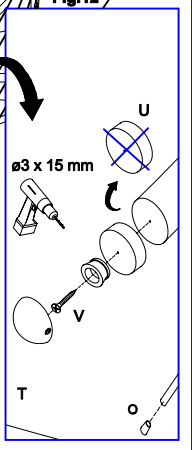
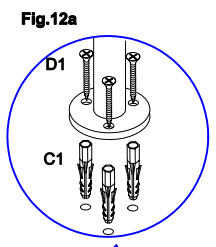
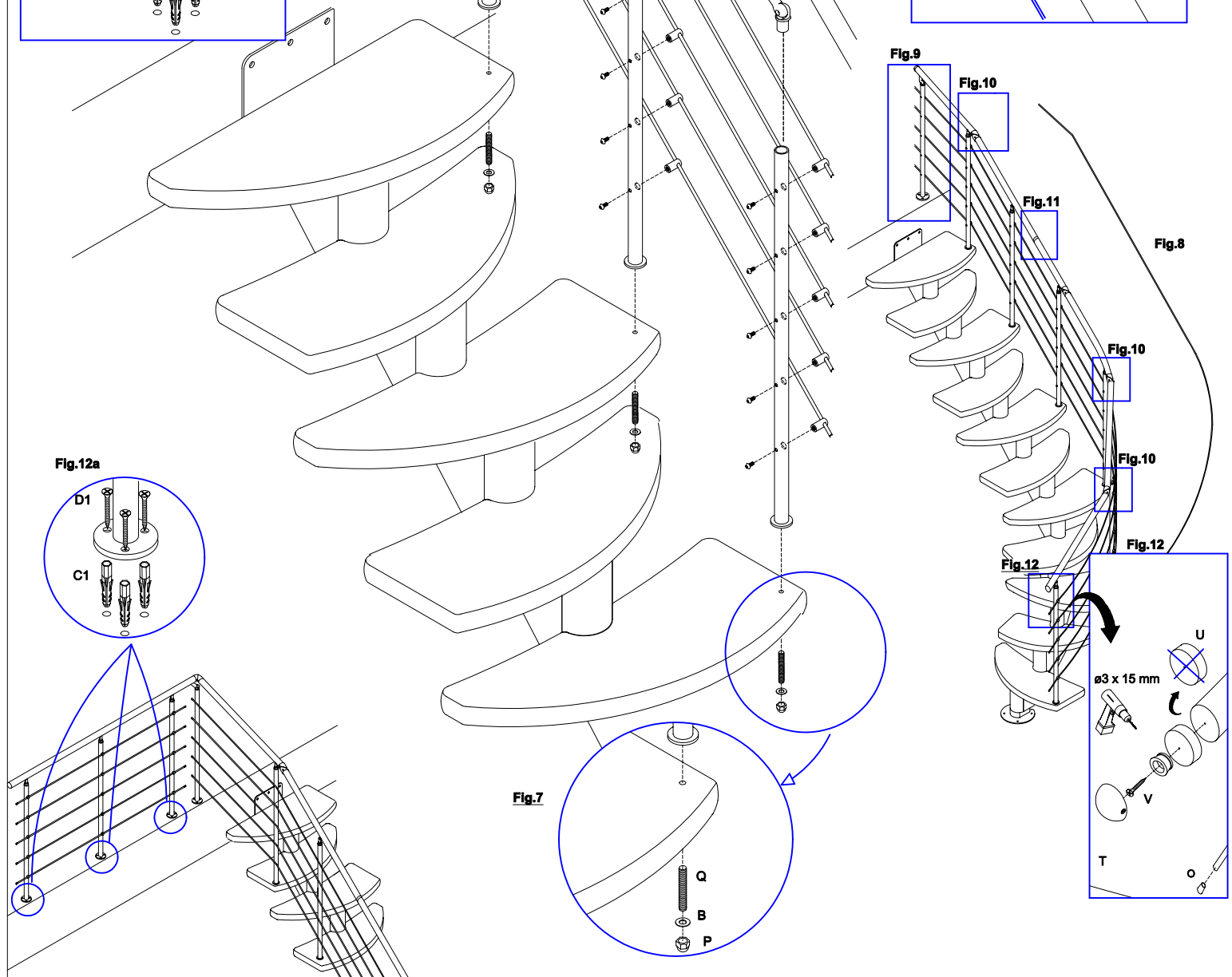
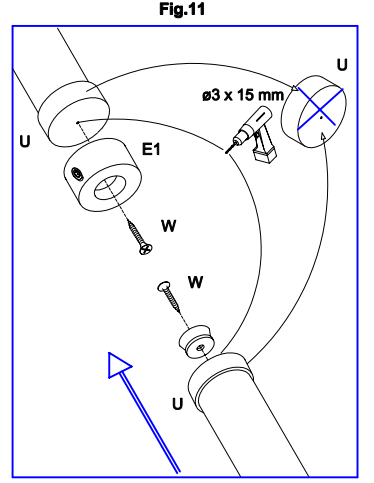
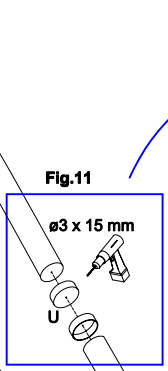
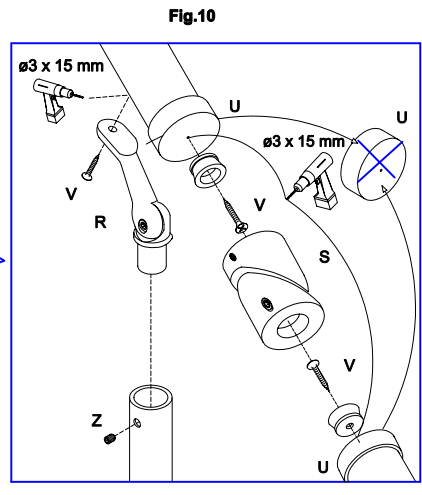
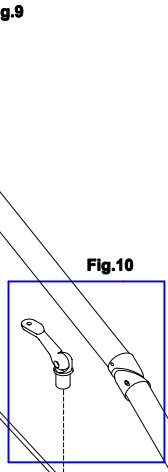
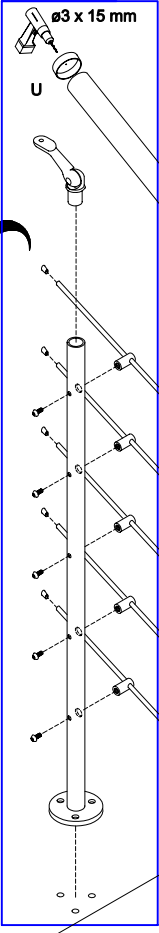
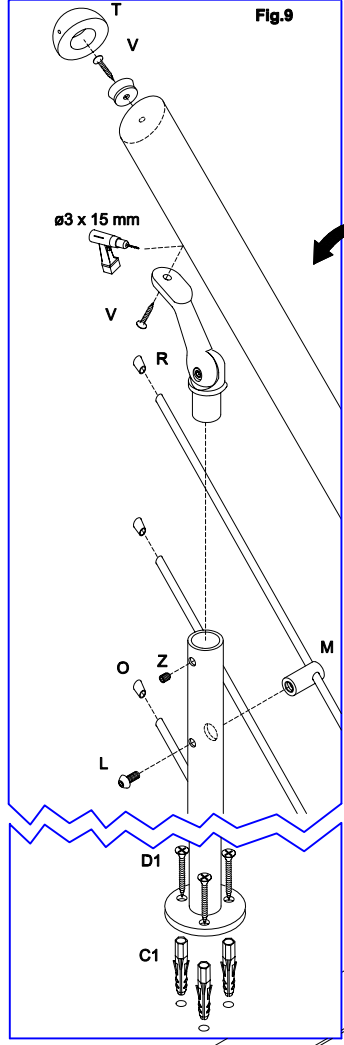


Fig.6





Mounting the balustrade

Start by drilling every second step up to the metal posts. Drill the holes with a diameter of 11 mm and drill 30 mm from the front edge and side of the step respectively. Use the drilling template (Fig. 13) for marking. If the balustrade is on the left-hand side, turn the drilling template upside-down. To prevent the steps from being scratched during drilling, we recommend that you clamp a piece of wood underneath each step.

Attach the posts as illustrated (Fig. 7)

Once all the posts have been mounted it is important to shape the wire balustrade and the flexible hand strip to follow the line of the staircase, since this will make the rest of the mounting process easier (Fig. 8).

The wire and hand strip will probably be too long, so they should be cut to the correct length. During mounting we recommend adjusting the length at the top, and cutting at the bottom after mounting.

Once the wire has been shaped to follow the line of the staircase, attach the fittings (M) then fix them to the posts as shown (Fig. 9). Start by mounting the second-top wire then work your way down. Mount the top wire after the hand strip has been mounted.

Then mount the hand strip (Fig. 9-10-11-12). Pre-drill using a 3 mm drill for the screws (V). To assemble the hand strips see (Fig. 10-11)

Now cut the balustrade to the correct length by the first step and finish off by attaching cover pieces to the ends of the wire (Fig. 12).

If you have a parapet balustrade on your staircase, mount it in the floor using 3 self-cutting screws (D1) and rawlplugs (C1) (See Fig. 12a).

After mounting it is important to check all the components to ensure that screws and bolts have been tightened correctly. The staircase should also be checked again after 3-4 months of use.

Fig.13

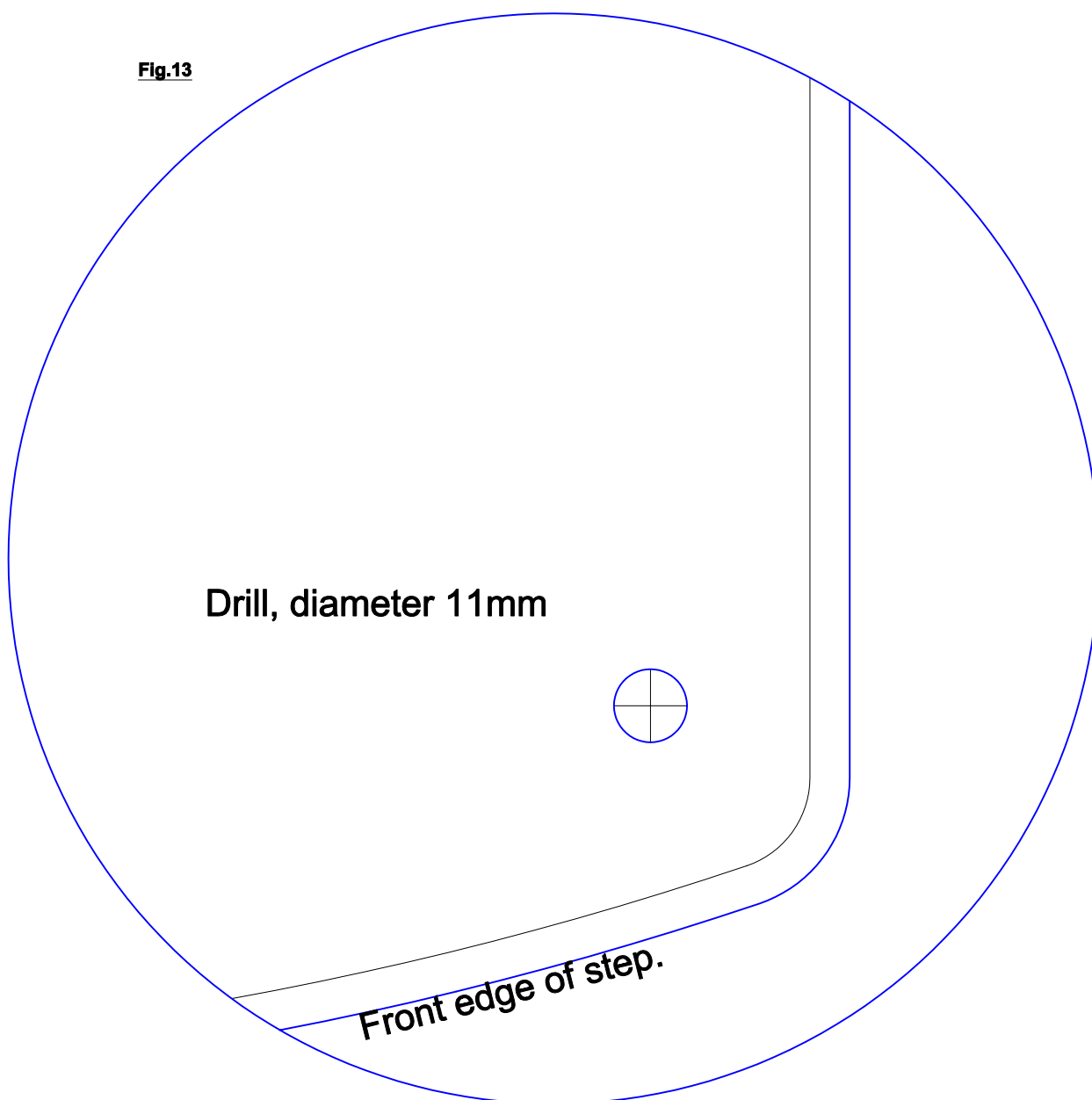


Fig.14

The banister can be mounted on both right and left side of a straight flight staircase. If the staircase turns, we recommend to place the banister on the outside of the staircase. If you mount the banister on the inside of the staircase, you might get difficulties in placing the balusters, which will complicate the mounting of handrail and wire.

