FOR RAILING HANDRAILS

Installation guide

An instruction film is available here. If you have any questions, please contact the factory: +46 (0)513-103 70, info@hlf.se.

Thank you for buying a Herrljunga Ledstångsfabrik railing system. We wish you the best of luck installing your new railing, and hope these instructions are clear.

Tools needed for the installation:

- ☐ Screwdriver / drill with PZ2 bits
- ☐ 20 mm drill bit
- ☐ 6 mm drill bit with countersink
- ☐ 3.5 mm drill bit
- ☐ Spirit level
- ☐ Square
- ☐ Cross-cut- and mitre saw (fine-toothed blade)
- ☐ Socket or open-ended spanner 19 mm
- ☐ Pencil or marker
- ☐ Folding rule / tape measure

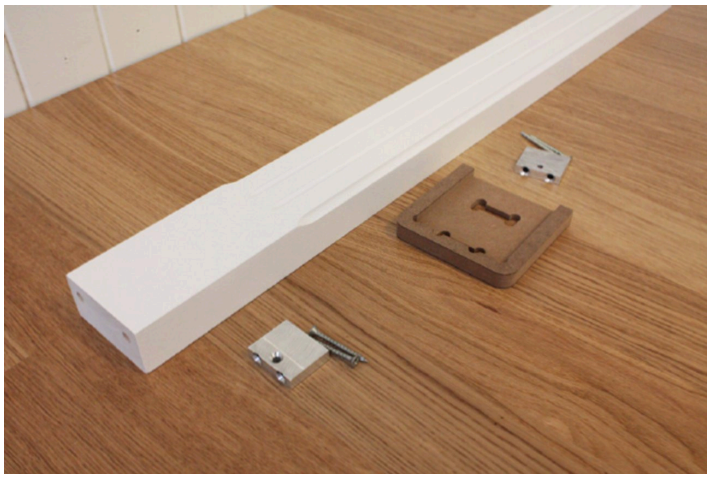
In this example installation we fit a half post against a wall, a corner post and an end post at a simulated stair end. This is a general installation guide. Every installation can differ, because no house is perfectly square.

The measurements given apply if you want the posts flush with the edge of the curve. You can also move the post outwards so that the bottom rail is flush with the edge of the curve. You choose the position of the balustrade yourself, but you can then adjust where you fit the posts and the post shoes. In this example the posts are placed flush with the edge of the curve. Think about how you want it before you start the installation.

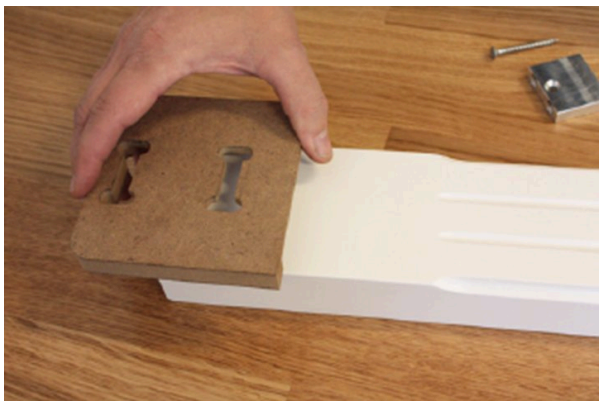
1. Start by unpacking all the parts and check that no damage has occurred in transit. The posts are fitted first, so set the rest aside to reduce the risk of damage during installation. White-painted parts are best placed on a soft, protective surface.

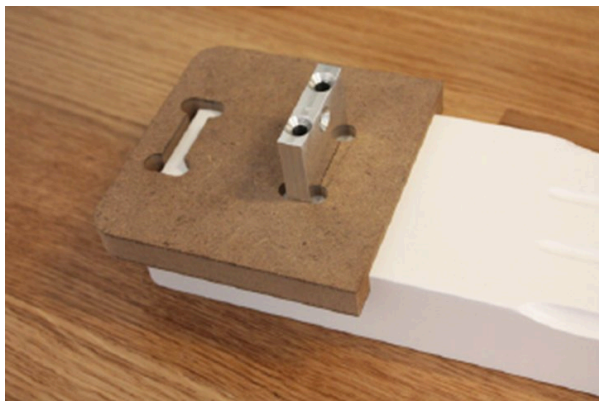
2. Fitting the half post. Find the parts shown in the picture below. For one half post you need:

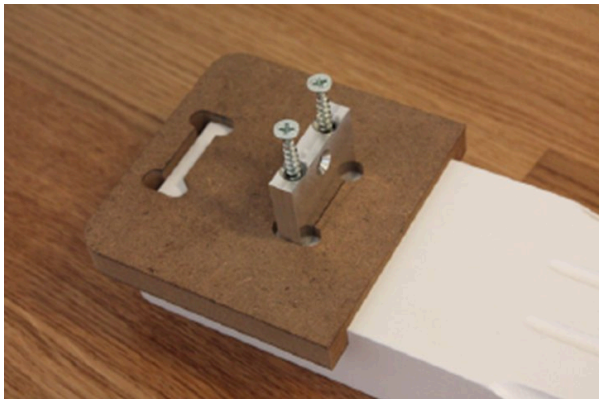
   - 1 pc half post 90x45 mm
   - 2 pcs aluminium plates
   - 1 pc drilling template (MDF)
   - 4 pcs screws 5x60

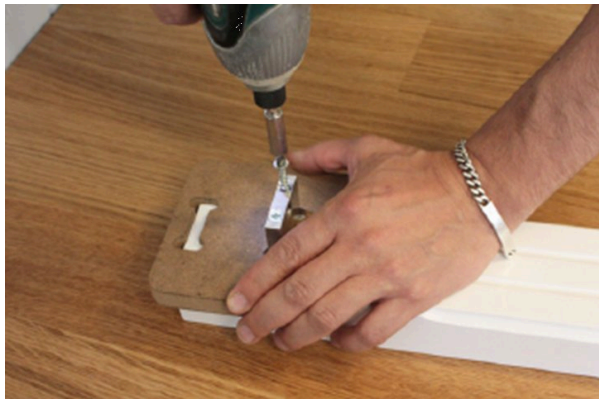


3 Screw the aluminium plate to the upper edge of the half post. The upper edge has two 10 mm holes drilled for the post cap at the end. The plate should end up 60 mm down from the end. Lay out the MDF template as shown in the pictures below and drive in 2 pcs 5x60 mm screws. Pre-drilling is not necessary.









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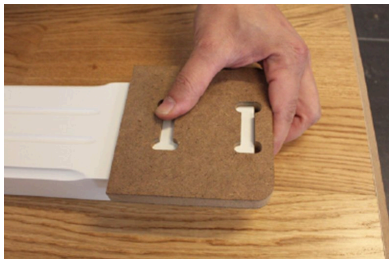
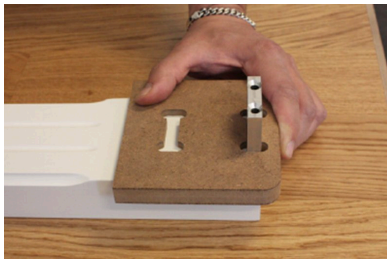
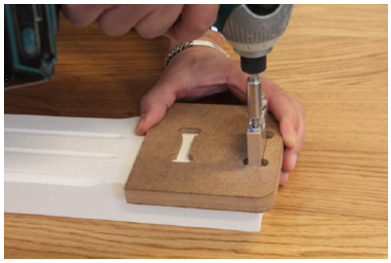
Now the alu plate at the bottom is screwed into place. Proceed as in the previous step, but this time use the other hole in the template. The plate should now be flush with the bottom edge of the half post.

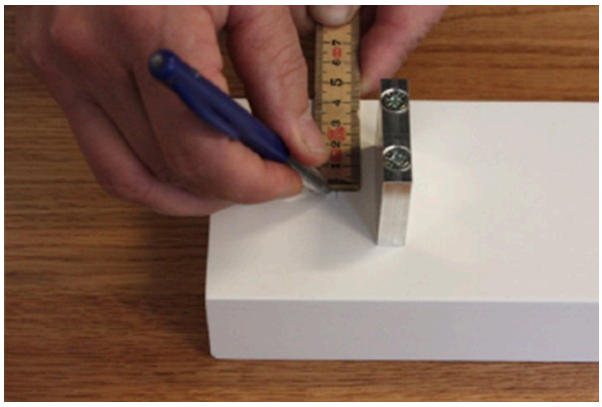
Since the plate will sit close to the edge, we recommend pre-drilling with a 3.5 mm bit. It is fine to use a screw to mark or drill while you hold the alu plate in place in the template.



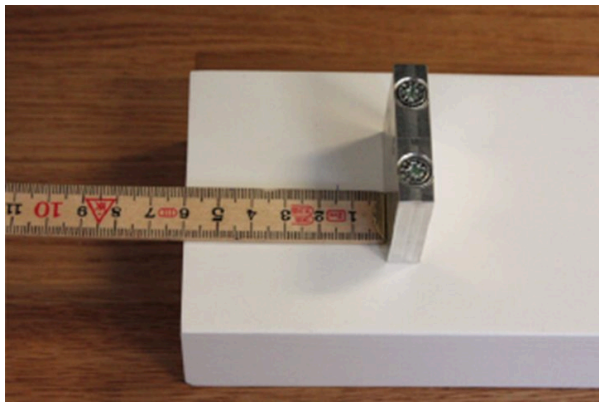




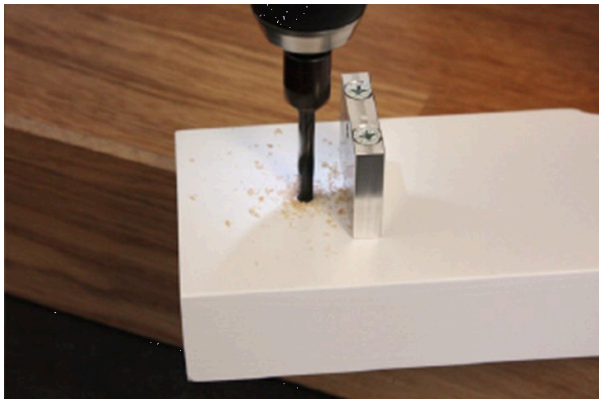
5 Now two countersunk holes are drilled, to be used later to fix the half post. In this case we have chosen to hide the screws behind the upper and lower rails, to avoid visible screws altogether. The first pictures show the top edge of the post.



The hole is drilled in the centre of the post.



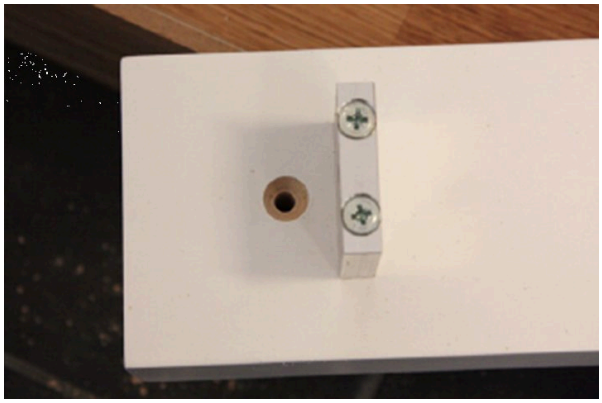
And 15 mm from the upper edge of the plate.



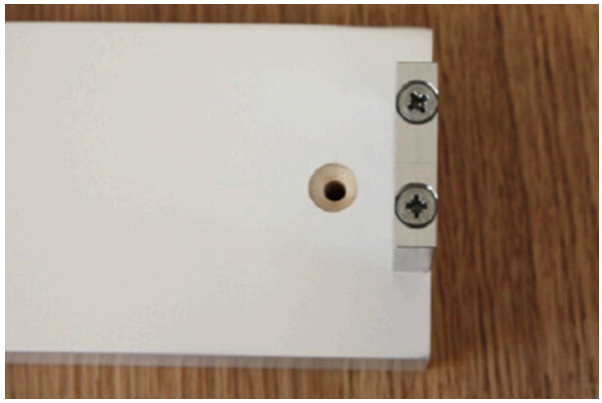
Drill all the way through.



Countersink so that the screw cannot catch on the rail.



It should now look like this.



The bottom edge is drilled the same way 15 mm from the upper edge of the plate.

6 Now the half post is screwed to the wall. Check that there is solid material to screw into. Two 5 x 80 mm screws are included. Wall plugs are not included. Hold the post level with the edge of the curve, then plumb it with a spirit level, put the screws into the countersunk holes and screw it fast.

7 Now a corner post is fitted. The same procedure applies to end posts, except that aluminium plates are used on one side only.

For one corner post you need:

- 4 pcs aluminium plates
- 8 pcs screws 5x60 mm
- 4 pcs screws 5x50 mm
- 1 pc post shoe incl. threaded rod, lock nut and square washer

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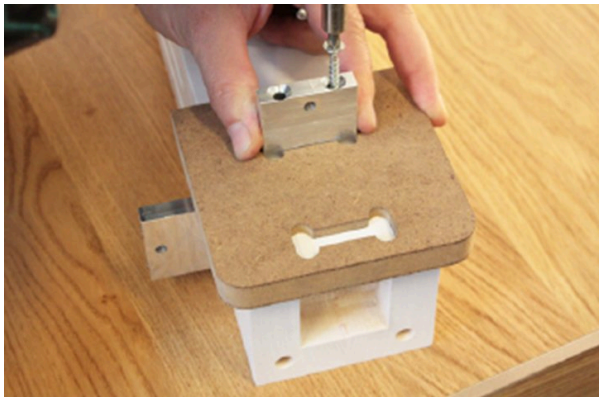
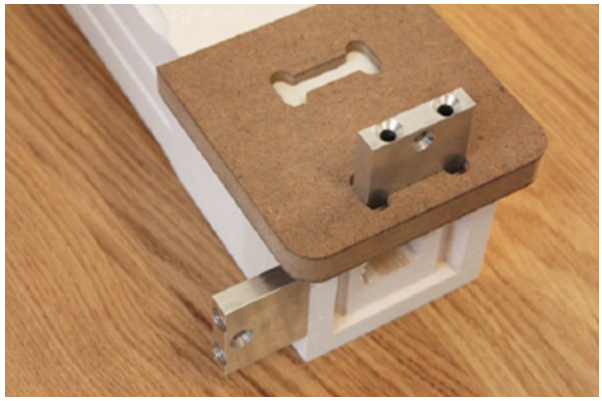
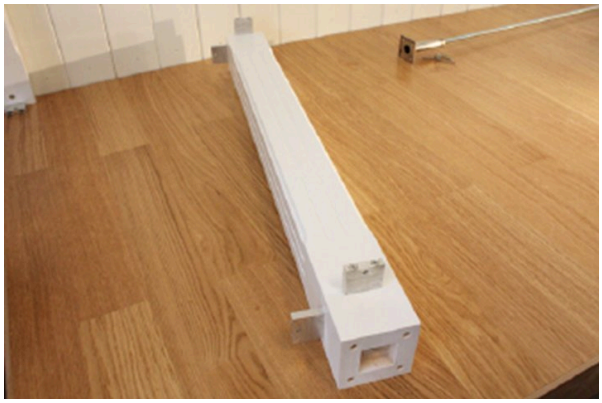
8 Now screw the aluminium plates to the post the same way as the half post in the previous steps. Here too the upper edge has 4 holes for the post cap. Since this is a corner post, the fittings are screwed on two sides.



Top edge of post. 5x60 screw.



Bottom edge of post. 5x50 screw. (pre-drill 3.5 mm)



The post should now look like this.

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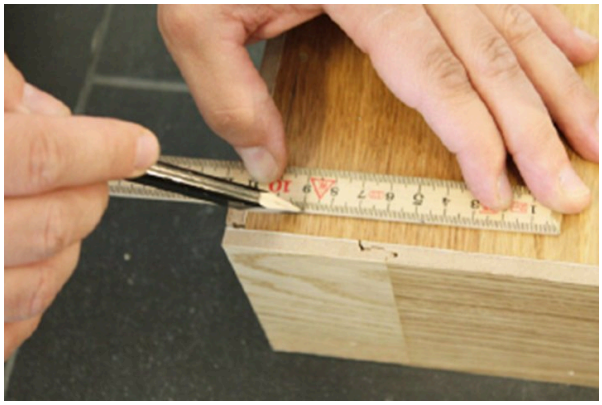
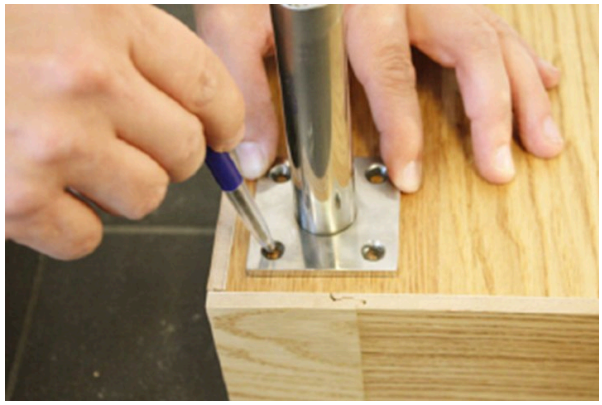
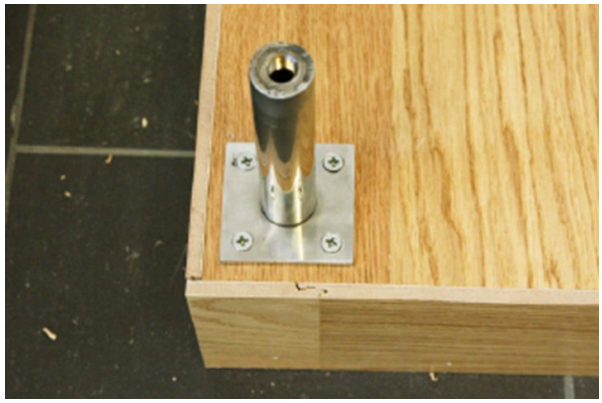
9 Now the post shoe is fitted. Measure 15 mm in from the edge of the curve on both sides and draw a line. Then place the post shoe at an angle and mark the holes. Pre-drill with a 3.5 mm bit. Make sure there is no underfloor heating pipe in the way. Then screw it fast with 4 pcs 5 x 60 mm screws. The measurements given apply if the post is to sit flush with the edge of the curve. You can also move the post outwards so that the bottom rail is flush with the edge of the curve. You choose the position of the balustrade yourself, but you can then adjust where you fit the posts and the post shoes.





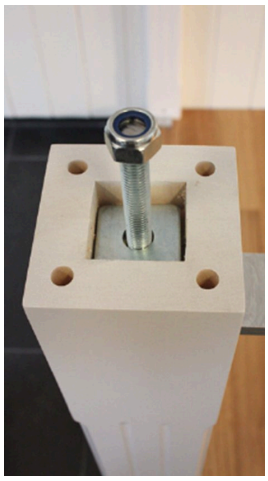




10 Then set the post in place with the fittings facing the right way. Fit the washer and tighten the nut so that the threaded rod engages the lock. You may need to hold it with pliers. Then tighten the threaded rod, adjust the post square and tighten lightly. Full tightening is done in the last step of the installation.











Now the corner post is in place too. Carry on and fit the remaining posts the same way. Just remember to place the aluminium plates facing the direction the railing runs. The next step is to drill and fit the railing sections.

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11 Find the bottom rail intended for the first section and set it out. For this step you need:

- Bottom rail
- The batten that sits in the top rail (not the top rail)
- Pencil, rule and try square
- MDF template for marking the centre, 6 mm drill bit with countersink

Start by measuring the distance between the posts of the first section at the bottom. In this case the measurement was 985 mm. Place the batten in the groove of the bottom rail and cut it to length. Cut carefully and check that the bottom rail fits between the posts. Take care not to scratch the post. Cut once more rather than cutting too much — test it out. The post can be adjusted by a few millimetres if it is correctly positioned. Do not cut the top rail at this point. If the wall leans slightly, the top rail may need to be a little longer.

Do not cut the top rail at this point. If the wall is slightly out of plumb, the top rail may need to be a little longer.

Spacing the balusters:

The length of our bottom rail was 985 mm. This is how you calculate it:

What matters now is that the centre-to-centre spacing is no greater than 145 mm

985 + 45 (the baluster dimension) = 1030 mm

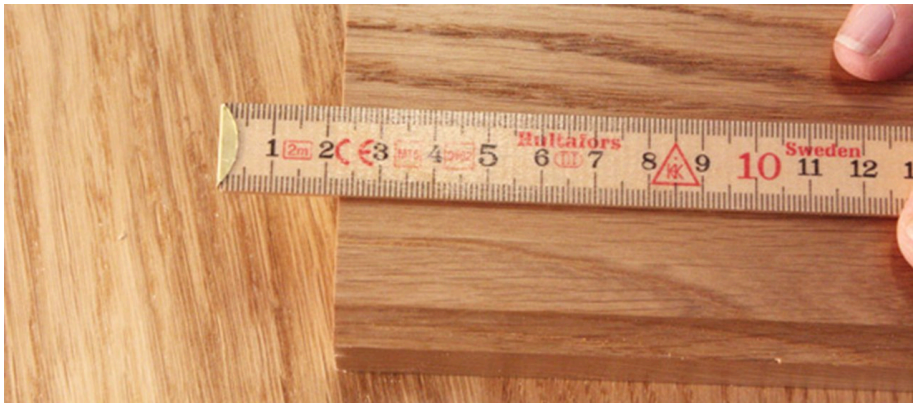
1030 / 145 mm = 7.1

That means we cannot divide by 7, because the value would then be greater than 145 mm — we have to divide by 8.

1030 / 8 = 128.75 mm

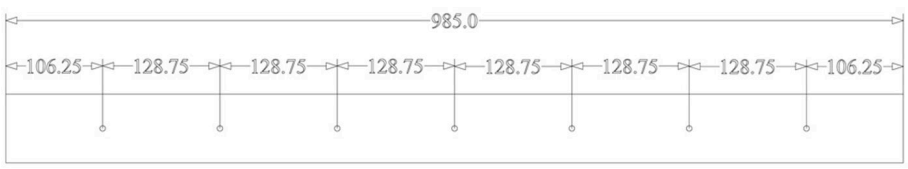
The centre-to-centre spacing on this section will therefore be 128.75 mm.

Now lay the bottom rail with the batten in the groove on the floor, and make sure the batten is flush at both ends. Lay the tape measure on the piece and start measuring from one end. Start by measuring 22.5 mm (half a baluster) outside the end, see picture:



Make sure the rule is positioned as in the picture above, and start by drawing a short pencil line at 128.75 (the centre-to-centre spacing calculated earlier). Then enter 128.75 + 128.75 on the calculator, press =, and in this case you get 257.5. Draw the next line at that measurement. Now press the = key again straight away and you get 386.25. Draw a line at that measurement too.

Now keep pressing the = key and mark the measurement on the bottom rail until you reach the other end. Also make a mark on the end of both the batten and the bottom rail, so that the ends always face the same way. You measure like this to get the most accurate result possible. When all the lines are drawn, check the measurement. You should now have 128.75 between every line except at the ends. There the measurement should be 22.5 mm less. See the example picture below:



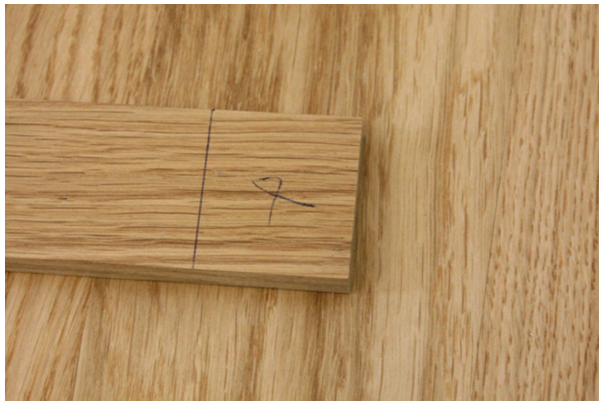
12 Drilling the bottom rail. Start by drawing the lines a little more clearly with a square. Then place the MDF template on the bottom rail. Drill a few millimetres down with the 6 mm bit in the middle hole of the template, once you can see your lines centred in the sight holes of the template. Marking the first position is enough.






When all the holes are marked, drill straight through the bottom rail and the batten. Remember that the batten and the bottom rail are flush with each other at the ends. You have to drill very straight to get a good result. By far the best and recommended way is to drill on a pillar drill. If you do not have one, someone you know may have one to lend you. We drilled with a screwdriver and got good results, but it is much harder. When the holes are drilled through the batten and the bottom rail, countersink the holes on the poorer side of the batten.

13 Now the batten is cut back at both ends to make room for the aluminium plate. 38 mm is removed at each end. See the picture below:

14 With the marks you made earlier facing the same way, the balusters are now screwed to the bottom rail. The batten should no longer be in the bottom rail — it will shortly be fitted on top of the balusters. A 5x60 mm screw was used for this step. No countersinking is needed in the bottom rail, as the screw ends up in the middle of the groove.









Put a screw in the first hole and make sure the baluster meets the centre hole of the baluster. Make sure the baluster ends up square to the bottom rail. A tip is to let the baluster rest against the floor. Repeat until all the balusters are in place.

15 Now stand the railing section up and screw the batten onto the top with the countersinking facing upwards. 5 x 50 mm screws are used for this step. Make sure the batten and the balusters end up as flush as possible. A slight step does not matter, because the top rail does not come down over the balusters. Now it is important that the marks face the same way — we marked with an arrow on both the bottom rail and the batten.







16 Now set the section in place between the posts. Check that the posts are plumb with a spirit level, then measure the length of the top rail at the top of the batten. Cut the top rail to size and test it carefully to make sure it fits. Once it is cut, set it aside again. We have a couple of holes left to drill.





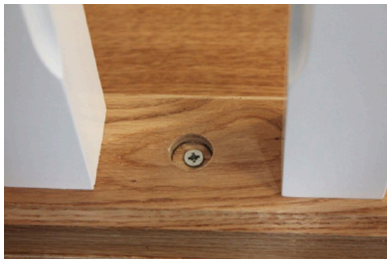
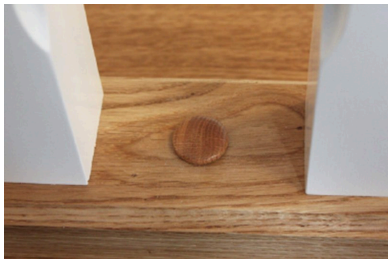


17 Then mark out holes for screwing the top rail through the batten. Drill between two balusters at intervals of about 700 mm. Drill with a 6 mm bit and countersink from below. It does not much matter where you make the holes, and you choose yourself how closely spaced they need to be. Then set the top rail in place, make sure it sits tight against the post and screw it fast. Screw it through the aluminium plate first at both ends, and then through the holes you have just drilled. Here we use 4 x 25 mm screws.






18 Now the bottom rail is drilled and screwed fast. The aluminium plates only have a guiding function here. Drill a hole between the first and second baluster at both ends. If your section is long, about 700 mm between the holes is also a good spacing to follow. Drill with a 20 mm bit, about 8 mm deep, then with a 6 mm bit straight through. Then screw fast with 5x80 mm screws and glue on a cover cap.

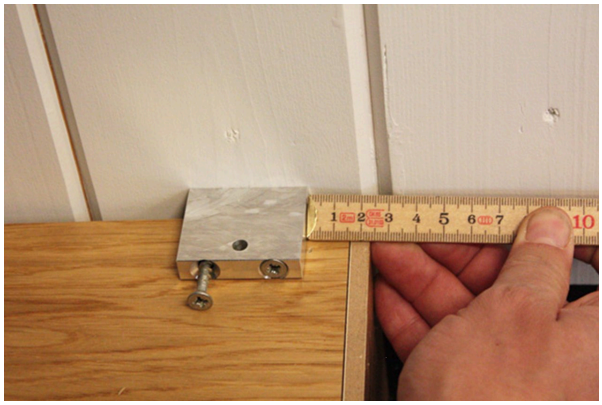
19 Now carry on assembling and fitting all the sections the same way we have just been through. When all the sections are in place and all the posts are tightened, the post caps can be glued in place with the 10 mm C-pins supplied. They may need to be tapped home, so take care and lay a smooth block on top to tap against. Using the smooth part of an MDF template is recommended, as these are no longer needed. Do not use too much glue, as this can make it hard to get a tight fit.

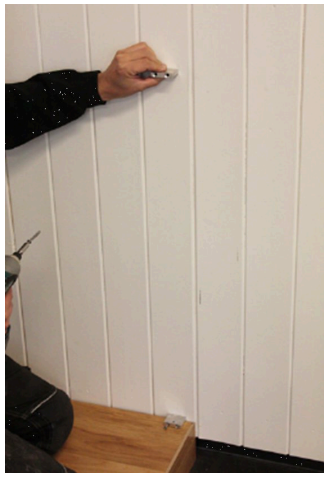






20 If you want to finish the railing directly against the wall there is no template, but you have to measure the position of the plates. The plates end up 22.5 mm in from the edge of the curve to the outer edge of the plate, if the post is to sit flush with the floor. The lower plate is placed against the floor and screwed fast. The upper plate is fitted 860 mm from the floor to the bottom edge of the fitting. Use a spirit level to set out the upper fitting.









Finished result for joining the railing directly to the wall.