

FENCE



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- I** *Fitting end caps and covers*
- *Dismantling the fence,
Regular maintenance*

A

Tools required

You need the following tools to fit your fence successfully:

- Impact drill
- Screw gun (not essential)
- Clamp
- Ø 3.8 and Ø 6 twist drill bits
- Concrete bit for screw Ø 5 (depending on mount and chosen bolts)
- 10mm open-end wrench
- 3mm and 4mm Allen key
- 50cm collapsible tube (airgun)
- Spirit level
- Metre stick
- Crosstip screwdriver
- Hammer
- Carpenter pencil
- Chalk
- Mason's ruler
- Several small bevelled levelling pads 2cm wide



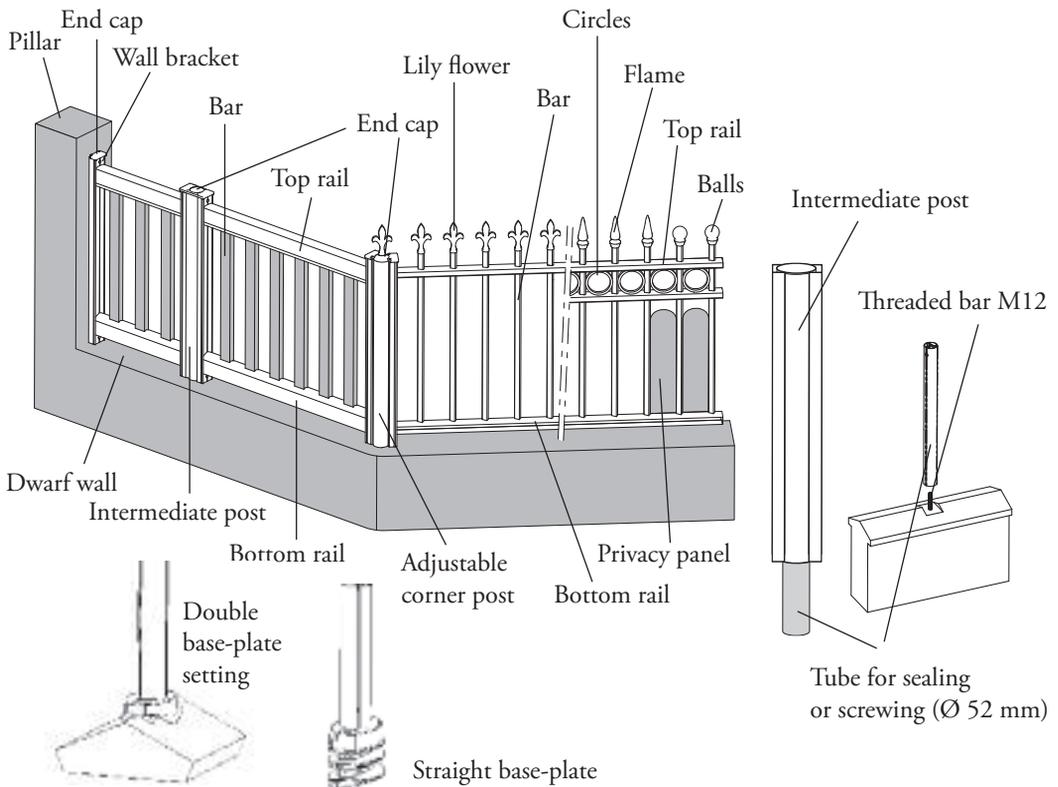
Fastening with resin-fix: Punch Ø 72mm

Fastening with chemical anchors: M12 chemical anchors and threaded rods (recommended length: 160mm)

Fastening with base-plates: M10 suitable for the mount (2 anchor bolts per plate)

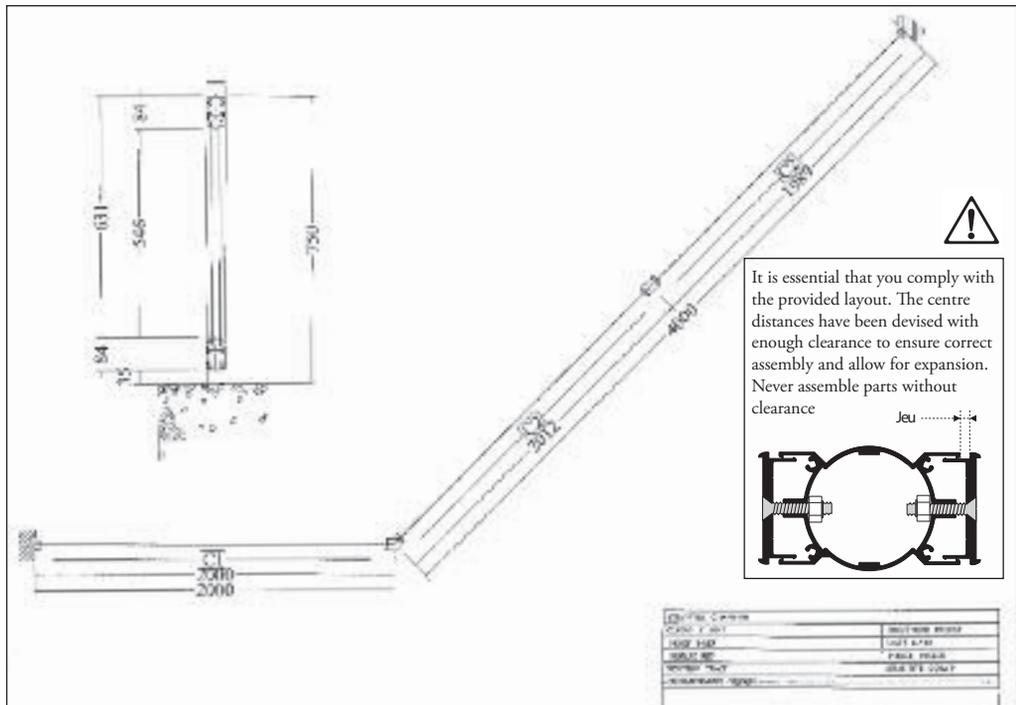
B

Some vocabulary



C *Your assembly plan*

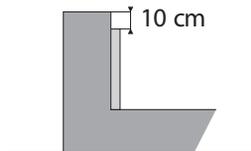
Your assembly plan was drawn up on the basis of the measurements you sent to us. The plan shows you the fastening points on the post axes. The size of the frames is adapted to suit these measurements.



This assembly plan separates your parts using a code – C1, C2, C3, etc. - that corresponds to the frame widths. Labels reflecting the code appear on each frame so that you can identify them easily.

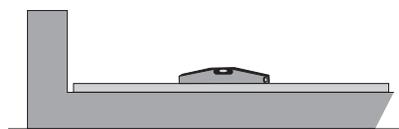
D *Checking measurements*

- ❶ If your fence begins against a pillar, make sure that the pillar rises above the wall bracket by at least 10cm.



- ❷ Check that the dwarf wall is horizontal enough.

A **slight slope can be tolerated** thanks to the clearance between the guides on the post and frames. The higher the fence, the lower this tolerance



To calculate the maximum slope tolerated by your fence height (H), apply the formula $S = 100 : H$ cm. For example:

- 200cm fence: $S = 100/200 = 0.5$ cm per 100cm of length.
- 50cm fence: $S = 2$ cm per 100cm of length.

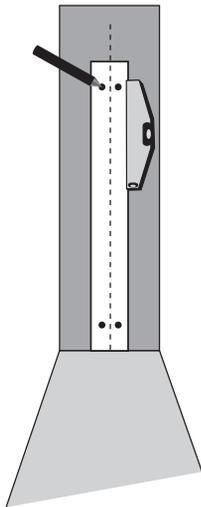


- ❸ While referring to the layout, use chalk to mark out the approximate locations of the posts. If there is a bump or hollow, the best thing to do is correct the masonry to make the surface even. This will ensure the posts can fit securely on to the wall and your fence will be perfectly straight and look impeccable, with no ups and downs.



- 4 Small discrepancies may, however, still appear when the posts are attached to the sealing tubes (see page 10).

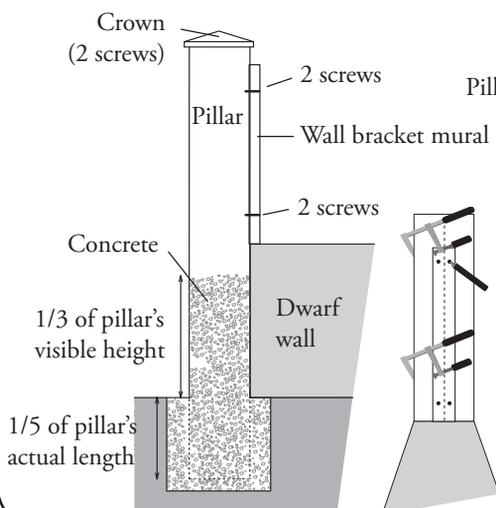
E *Fitting the wall bracket*



- ❶ Mark out a vertical line to indicate where the wall bracket's axis goes.
- ❷ Position the wall bracket on the dwarf wall. Use a spirit level to check that it is vertical. Hold it in position and use a pencil to indicate the locations of the drill holes.
- ❸ Use the fastening method appropriate for the type of material that you are fitting the wall bracket on to (4 screws \varnothing 5 per wall bracket).

OPTION

Aluminium post option

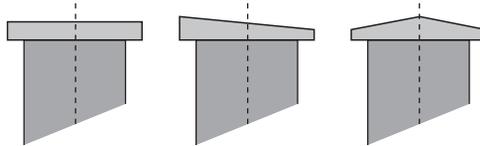


- ❶ The pillar must be sealed perfectly straight and in the fence's axis.
- ❷ After drying, position the bracket with its clamps and mark out the drill holes
- ❸ Pre-drill \varnothing 3.8
- ❹ Screw in the 4 specially supplied 4 self-drilling screws.

F

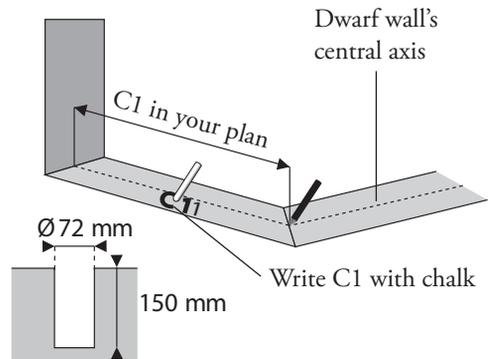
Fitting the posts' mounting tubes

The Ø 52 post mounting tubes can be resin fixed on the dwarf wall's central axis, irrespective of shape, or anchored.



1 Use a pencil to mark out meticulously the location of the tubes' axis. Precisely use the measurements on the assembly plan that came with your package.

2 Use chalk to write the frame code that appears in the assembly plan. In this example, it is: C1.

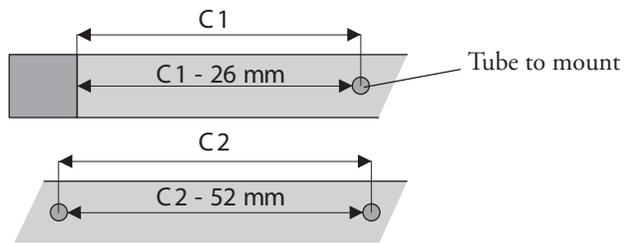


3 Resin-fixing

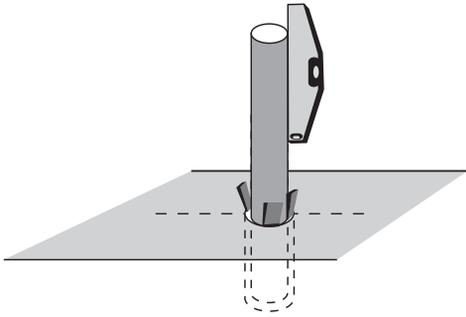
- Punch Ø 72mm to a depth of 150mm.
- Blow away dust with air gun.
- Mount the tubes:
 - Insert the tubes.
 - Using bevelled shims, adjust tubes' position so that the axis respect the measurements and make sure that the tubes are straight.

Recommended mixture

30% sand
 30% cement
 30% aggregate
 + water



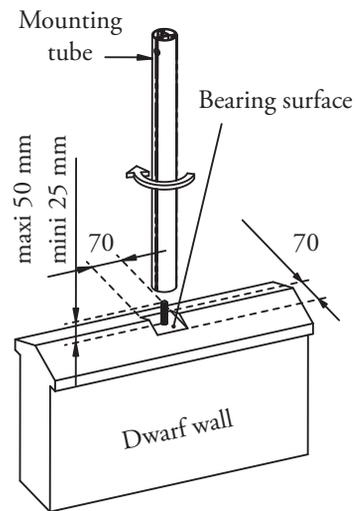
TIP: moisten the holes before sealing to ensure best concrete grip



- Pour the concrete
- Leave to dry before putting in posts

4 Fastening with chemical anchors

- Only use M12 chemical anchors with threaded bars. Make sure that the dwarf wall material allows for solid anchoring.
The tube's bearing surface must be flat, horizontal and measure 70 x 70mm (touch up if necessary).
- Observing the line of the tubes' axis, drill vertically using the shims' diameter, and then blow off dust.
- Insert the shim. The threaded bar must protrude by 25mm (min.) to 50mm (max).
- Once the resin has hardened, tighten the mounting tube.
- Check that the tube is vertical, correcting the bearing surface is necessary.



5 Fastening with base-plates

Double-setting base-plate



Top angle from
130° to 180°

Straight base-plate



Max. ground slope 2,50 %
Standard shim dwarf wall slope: 6% Max.
shim 4°: 12% Max.
shim 8°: 19% Max.

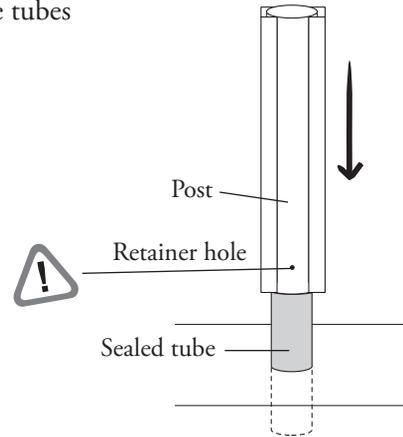
- Lay the middle of the base-plate where the posts go.
- Mark out the shims' anchor bolts.
- Fit the anchor bolts.
- Adjust the shims to the cap the top of the slope.
- Adjust the vertical straightness of the Ø 52 tube
- Fit the base-plate.

G

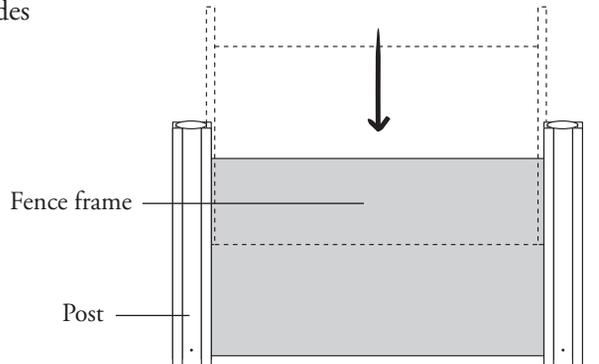
Assembling the parts

- 1 After the sealant has dried, insert the posts into the tubes
 - Intermediate posts for straight parts
 - Adjustable corner posts for corners

Pay attention to the direction. The posts' retainer hole on the tube must be at the bottom and inside.



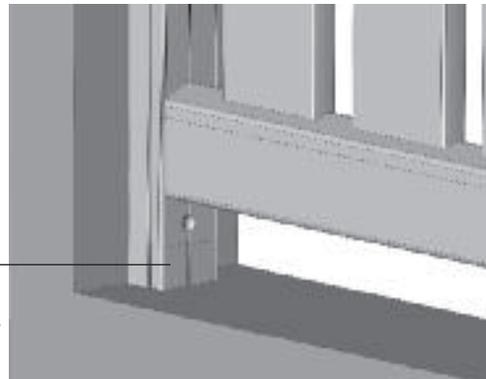
- 2 Put the frames into the posts' guides or wall brackets.



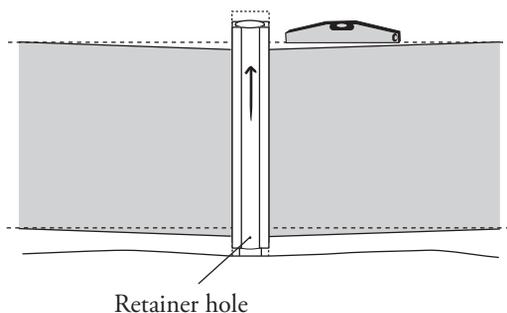
Wall brackets

Specific to base-plate fastening

Batten bar to be fastened with silicone adhesive during assembly



H *Fastening assembled units*



① Start by checking how horizontal the fence is. If there is a slight gradient at any point in the wall, fasten the post higher up to offset this.

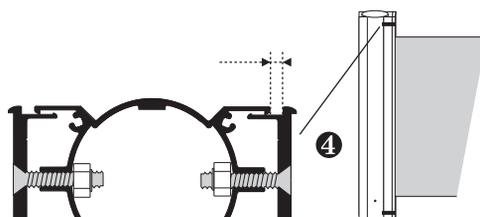
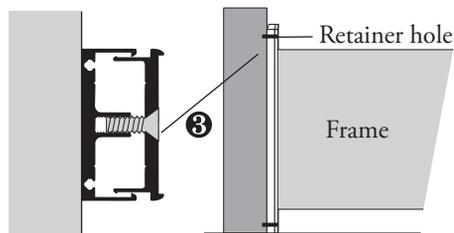
② **Clamp the tubes** using the headless screw (3mm Allen key).

③ **Fasten the frames to the wall mounts at the top and bottom.**

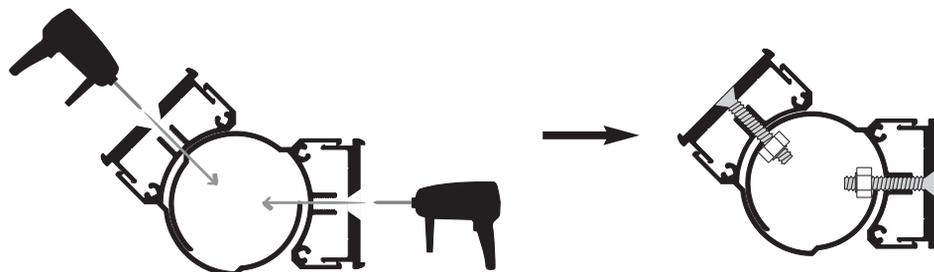
Use the countersunk head screws with $\text{Ø } 6$ and length of 20mm

④ **Fasten the frames to the intermediate posts at the top of the guides only.**

Use the countersunk head screws with $\text{Ø } 6$ and length of 35mm, and the 6mm nuts.



⑤ **Fasten the frames to the adjustable corner posts.** Use a $\text{Ø } 6$ drill bit to drill into retainer holes at the top. Depending on the angle, it will cross one or two shells. Enter the screws and bolt them from the inside.

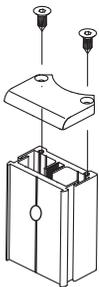


I

Fitting end caps and covers

1 Fit the end caps:

- At the top of the wall brackets



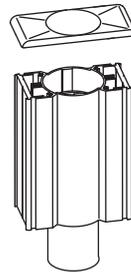
Put the end cap in place and tighten
(Ø 4.2 screw—length 25mm)

- At the top of the adjustable corner posts



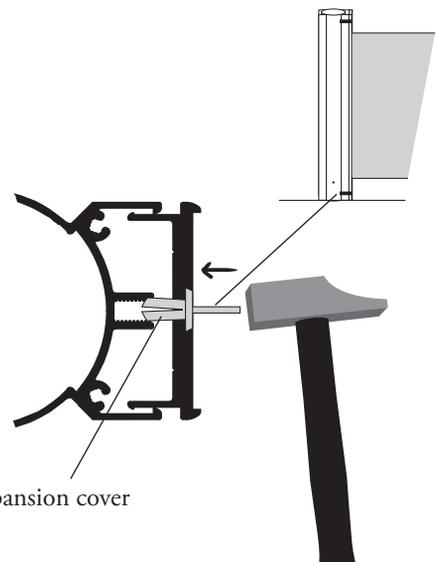
Put the 3 parts in place and tighten

- At the top of the intermediate posts



The end cap clips on

- ### 2 Put the expansion covers in the unused retainer holes at the bottom of the posts, on the frame side. Fully insert the outstanding rod.



Dismantling the fence

- Perform steps in the reverse as for assembly.

Cleaning

- Use clear water. A neutral detergent may also be used but never any alkaline, acidic or abrasive detergent.

Maintenance

- In a seaside environment the product must be cleaned at least four times per year. In an industrial or urban environment, clean it at least three times per year, while at least two times a year should be sufficient in a rural environment.

If your fence ever suffer damage, it is possible to dismantle it in a way that facilitates replacement of the damaged parts. Your fence has no welding and is assembled entirely mechanically with stainless steel screws and bolts.



—horizAL—

