

## Erection of WaterWall Barrier

Ensure the Ground Insert's Caps/Covers are removed and that the exposed area that the Demountable Post will be inserted into, is clear of any debris. Remove the yellow thread protection cap.

If you are standing on the "flooding" side of the barrier, you can place the Demountable Post into the Ground Insert with the word "Front" facing you and then, turning the top hexagon head, engage the thread by 2 - 3 turns.

**Do not tighten fully at this stage.**

Ensure all compression screws are in position, but not obstructing the passage of the panels.

With all the Demountable Posts in position, lower the "Bottom" panels, one by one, so that the Dual Hardness Bottom Seal is in contact with the ground.

Still with all Posts "loosely" fixed, lower all of the "Middle" and "Top" panels and ensure that the middle seals fully engage with the panel above.

It is important to check that both ends of the Middle Seal extend completely to either end of the panel. If they are short of the end there is a chance that they will not seal to the vertical D-Seal on the Fixed or demountable Post.

All screws can now be "Finger" tightened.

**Do not use T-Bar yet.**

Once all have been "Finger" tightened you can fully tighten the Demountable Post hexagon head using the T-Bar through it.

Again using the T-Bar provided, please give each horizontal fixing bolt only half a turn so that there is pressure on the barrier panel pushing it onto the vertical D-Seal.

Now, in equal stages, tighten all Vertical Post compression bolts so that the downward pressure on all the panels is maximised.

Then starting from the bottom panel, upwards, and in equal stages, give the horizontal Compression Screws enough turns that the panels are pressed firmly onto the Vertical D-Seal

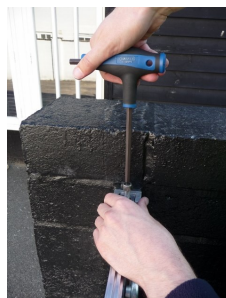
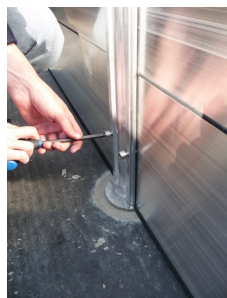
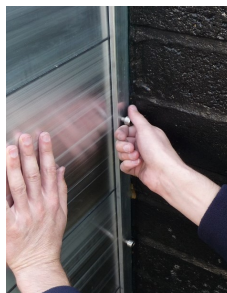
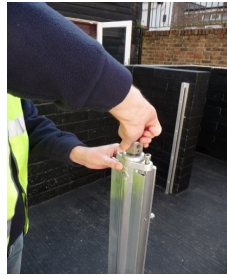
**DO NOT OVER TIGHTEN.**

The system is now ready.

When dismantling it's suggested that the order is reversed ie. release the vertical compression screws, then the horizontal and then, finally, the Demountable Post Hexagon Head fixing.

All components should be allowed to dry before storage, the male thread on the bottom of the Demountable Post should have a small dab of grease applied as should the female thread in the Ground Insert before their protective caps are replaced.

The above procedure should be carried out every 2 -3 months, just to ensure that all components are present and to ensure that all seals are present. The threads should be regularly greased.



# CARO

## Flood Defence Systems

Installation and Erection

Instructions for

# Caro WaterWall

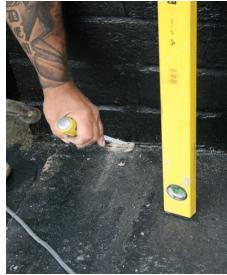
Edge Barn, 11 Market Hill, ROYSTON Herts SG8 9JN

Tel: 00 44 (0) 1763 244446 Fax: 00 44 (0) 1763 244111

Email: [info@caro.co.uk](mailto:info@caro.co.uk) Web: [www.caro.co.uk](http://www.caro.co.uk)



## Installation of Wall Rails (Face and Reveal)

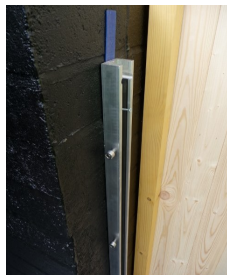


Clean walls and base with brush and ensure that there are no raised obstructions or projections that could affect the final position of the Wall Post



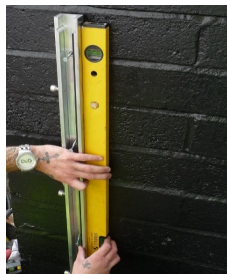
Confirm previously made measurements of opening widths  
If top and bottom gaps vary, take the smallest size. You must ensure that finished rails are totally vertical

Panel widths will have been calculated according to the Caro Flood Defence Systems guide available on a separate publication.



Place EPDM Rubber Wall Post Sealing Pad in position so that Wall Post will compress and seal to the pad when fixed

**NOTE:** The Vertical D-Seal is supplied so that it's position is retained, so that it is longer than the Wall Post. This is to ensure that when the Wall Post is positioned onto the EPDM Pad the D-Seal will also seal into the Pad. You may wish to use a little sealant/adhesive to ensure watertightness



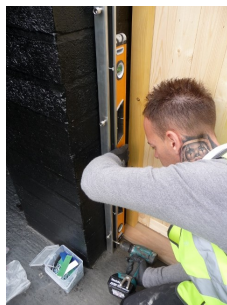
Use packing shims (normally for double glazing) easily available from Builders Merchants - so if narrow at bottom, pack out at top – if narrow at top pack out at bottom

Mark hole positions – drill holes and insert plugs to suit 6 x 50 screws ensuring that the Wall Post is compressing the EPDM Pad



Using CT1 Adhesive Sealant (available from your local Merchant or CaroFDS directly) apply in two continuous lines down the full length of Wall Post back

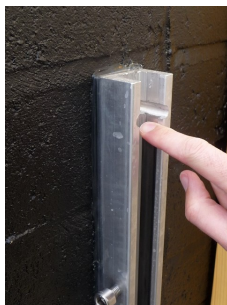
**SUGGESTION** – prior to the application of the CT1 use some masking tape along the sides that will have CT1 applied to seal the edges. This will allow excess CT1 to be kept away from sides and threaded holes and give a neat tidy finish to the finally applied areas



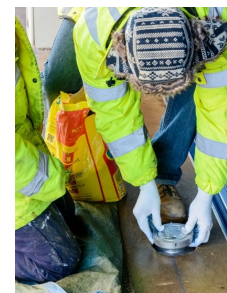
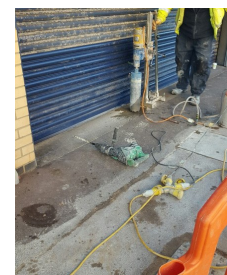
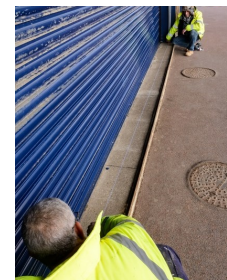
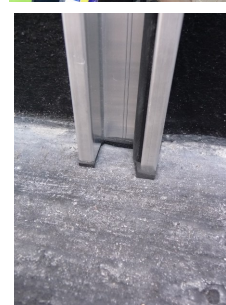
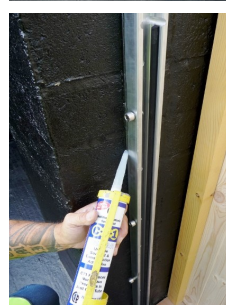
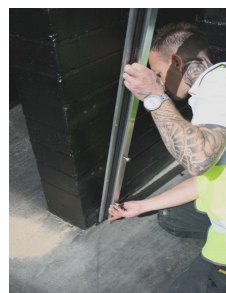
Hold the post in position, with back against wall, so fixing screws can be inserted into top and bottom holes

Using spirit level and packing shims, tighten all screws and ensure that finished Wall Post is completely vertical

Apply extra CT1 to all exposed edges to completely seal the verticals and finish the aesthetic look of the installation



Trim off excess edges of EPDM pad under wall post and, if required, apply CT1 sealant adhesive in cases of "rough" ground, without obstructing inner opening.



## Installation of Ground Inserts for Demountable Posts

Having previously referred to the Caro Flood Defence publication for "Calculating Panel Widths and Ground Insert Positions for WaterWall", strike a line between the two fixed Wall Posts that have been fixed and sealed into position.

Measure along the line and mark the positions for the Ground Inserts. Prepare the Ground Insert. You can leave the cap on or off but ensure that the yellow protective cover for the thread is left in position during all stages of installation.

If installing into an existing concrete base, it will be best to core out a hole of 150mm. This will allow the Ground Insert to have sufficient space around it for levelling and for the wet mix, Rapid Setting Cement to be poured. If installing within a new concreted base, it is suggested that the required holes are shuttered out using 150mm plastic drainage pipe, that is easily removed after the concrete has set, thereby leaving the required holes (see above)

It is not recommended to cast the Inserts in during the pour as it will be very difficult to ensure that they are not disturbed during the installation and are moved out of true.

Once the holes have been completed, place the Ground Inserts in position. There are two "pointers" on the perimeter of the top, that help to follow the correct "pinged" line.

**VERY IMPORTANT** The word "Front" must be on the "flooding side" as the Demountable Post is designed to be inserted in one way only - prevents confusion in the dark .

It is recommended that the hole/core is through the full thickness of the slab. In this way it allows some coarse gravel to be placed at the bottom of the hole on which the Insert can rest during it's installation and levelling. Once installation has been completed that "opening" at the bottom will prevent the Insert from becoming "waterlogged" during normal rainy conditions.

It is also recommended that the bottom of the tube of the Insert is stuffed with some old newspaper—this will prevent the cement from sealing the bottom or coming up too far into the tube.

Now ensure that Insert is completely level - **VERY IMPORTANT** - and it's height is exactly the same as the surrounding area.

Knowing that the Insert cannot move, pour a wet mix Rapid Setting Cement around so that it is finished flush and level with the top of the Insert and the surrounding level.

When all have been completed to your complete satisfaction, and only after they have had time to cure, you can insert the Demountable Posts to check that they are all completely vertical.

