Torc Series I Ground Anchor

Fitting Instructions for Concrete Floors

(03-Jun-05)

Important Requirements

Caution: Be careful that you do not drop the anchor on your foot or allow the shackle to fall on a finger!

Any security installation is only as strong as its weakest link:

The Torc Ground Anchor must be used in conjunction with an appropriately fitted Sold Secure-approved lock and chain.

The integrity of the anchor is dependent upon the quality of the surface to which it is fitted.

If you are unsure, please contact your supplier for advice.

What Tools Will I Need?

The fitting kit includes all parts that are required. The only tools you will require for floor mounting are:

- An electric hammer drill with at least a 12mm chuck capacity (variable speed recommended)
- A medium sized hammer
- Eye protection – goggles or a visor should be worn
- A pencil or felt pen or similar for marking holes to drill

How Long Should I Allow to Fit an Anchor to a Concrete Floor?

30-60 minutes as a guideline. Be careful and don't rush. The ground anchor will be ready for use the following day.

What Parts Should be in a Floor Fitting Kit?

The Torc anchor floor fitting kit uses top quality Liebig resin capsules for maximum security in variable condition concrete floors:

- M10 x 90mm long high tensile (10.9-rated) hex socket countersunk bolts, fully threaded (qty. 4)
- Liebig KLP10 M10 chemical resin anchor capsules (qty. 4)
- Hardened steel ball bearings to suit bolts (qty. 4)
- Blanking plug
- Hex rod 6mm AF to suit bolts
- M8 x 50mm hex head bolt
- Length of flexible PVC hose
- Masonry hammer drill bit 12mm straight shank
- Hole drilling template
- These instructions

How to Fit a Torc Ground Anchor to a Concrete Floor

The Torc ground anchor is designed to be fitted by any competent DIY enthusiast.

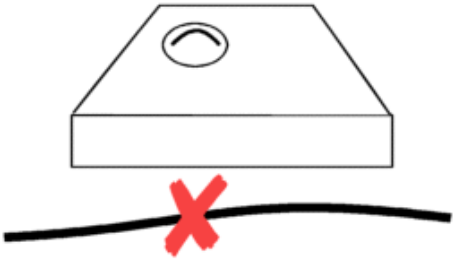
You should read through these instructions in their entirety *before starting to fit an anchor*. If you are not confident of your ability, you should ask an experienced person or professional builder to help.

If you are installing in unusually high or low temperatures (below 0 or above 30 Celsius), please contact your supplier before proceeding.

In the following instructions, the term *motorbike* is used to mean any valuable item that you wish to secure with your ground anchor.

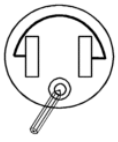
1. **Check the contents of the Fitting Kit:** Ensure the fitting kit is complete (the items are listed above). Check that the resin capsules are all unbroken and that the resin inside flows like honey. Contact your supplier if there are any parts missing or damaged.

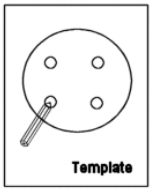
2. **Choose a good location:** Be careful to choose an appropriate location for fitting your anchor, clear of any pipes, cables etc (the use of a metal detector or other pipe/cable detector is recommended if you are unsure). The anchor is designed for permanent installation so take time to ensure the chosen position will allow you to secure your motorbike with the chain etc that you have chosen. Putting the anchor near a corner or other location such that the motorbike restricts access to the anchor can make it a lot harder for a criminal to attack, as can keeping chains and locks off the floor. We recommend that you place the anchor loosely on the floor and check that you can get the bike into position and then ensure you can actually fit the chain & lock. Time spent now checking the intended location is much better than realising later that you can't get the bike within the range of your chain!



   Remember that any anchor is only as good as the substrate it is fitted to.

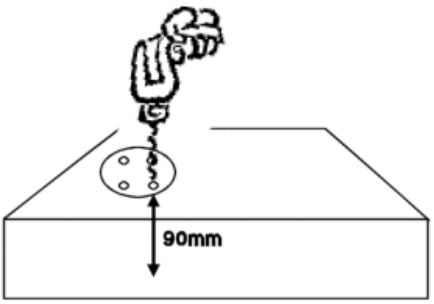
3. **Mark the holes to drill:** Either using the anchor itself or the template provided, *carefully* mark the holes to drill using a pencil or felt pen, for example. If you are using the template, pierce *small* holes through the centres of the bolt marks; If you are using the anchor, rotate the top plate to expose each bolt hole, being careful that the anchor doesn't move as you mark the holes (it helps if you hold it by the shackle and lift slightly).



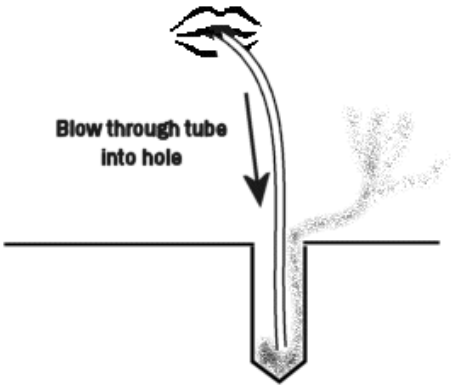


   Check carefully that all four holes are marked at the centres of the bolt holes in the anchor. Accuracy is important here.

4. Move the anchor out of the way and then, using eye protection, good ventilation and a hammer drill, carefully **drill the holes** to 90mm depth. Be careful to avoid the drill drifting sideways as you drill and keep it vertical. The drill bit supplied is marked with tape at 90mm – the tape should just touch the surface of the floor as you finish drilling each hole – **don't drill too deep!** Take care not to breathe the dust and try to prevent the dust from falling into the other holes – it is best to sweep the dust away from each hole before drilling the next hole (a vacuum cleaner is ideal).

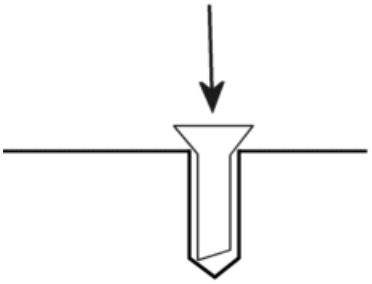


5. **Clean dust from inside the holes:** It is very important that the holes are as clean as possible if the resin is to achieve a good bond. The drill will often leave a lot of dust at the bottom of the hole so it is a good idea to spin the drill up and down to *screw* dust out of each hole. Take care again that you don't sweep dust from one hole into another hole!



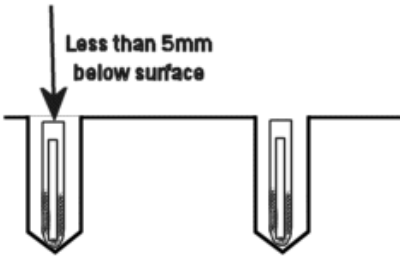
Then, still wearing eye protection and taking care to avoid breathing the dust, use the plastic tube provided to blow any remaining dust out of each hole. Place one end of the tube in your mouth and, whilst blowing, move the other end of the tube up and down in each hole. Keep doing this until the holes are clean and no more dust blows out. This stage is easier if you have a source of compressed air, a vacuum cleaner running in reverse, or any other suitable blowing device, but take care to protect your eyes however you clean the holes.

6. **Check that the holes are clean and deep enough:** Drop a bolt into each hole in turn and check that it falls freely until the underside of the countersunk head rests on the surrounding concrete. It is surprising how easily compacted dust can remain at the bottom of the holes – if the holes are not clear or simply not deep enough, repeat the relevant steps above to achieve the correct depth and holes clear of dust.



Also check that the holes are in the correct positions by placing the ground anchor over them and inserting all four bolts through the holes in the anchor and into the holes in the floor (*again without any resin capsules*), turning the top plate to gain access to each hole in turn. Errors up to 1mm can be corrected by redrilling; greater errors need you to start again or seek advice from your supplier. Lift the anchor away to remove the bolts.

7. **Insert the resin capsules:** Gently slide one of the glass resin capsules into each of the four holes, with the rounded end pointing down like a torpedo. The ends should all be flush with the surface of the floor or no more than 5 millimetres below.



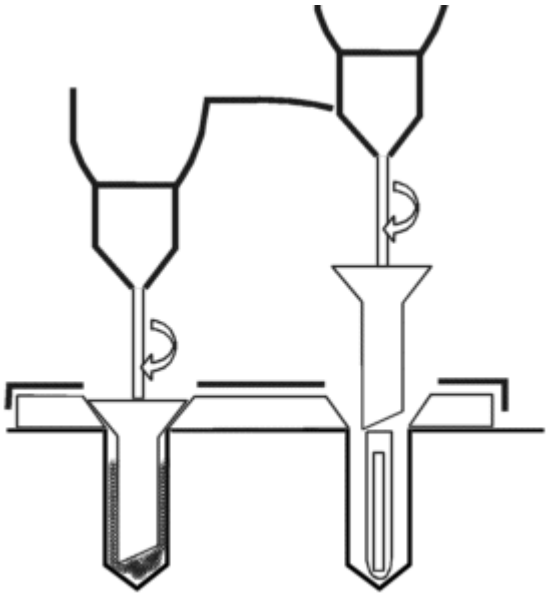
8. **Place the anchor in position**, taking care to line it up with the holes (rotate the top plate again to check all four holes).

9. **Drive the bolts into the capsules:** If your drill has a gearbox or speed range selector, set it for its lowest speed and ensure you are wearing eye protection. **Ensure the drill is still set for hammer action** – this helps to mix the resin as the bolts are driven home.

   Insert the hexagonal rod supplied into the drill chuck and prepare to use it to drive each bolt into the glass capsule. The end of each bolt is sharpened to a chisel-like edge: this helps to break the glass; to mix the resin with its hardener as the bolt is screwed into the capsule; and it also helps to prevent the bolt being unscrewed after the resin has set.

   It is important that you do not over-drill the bolt into the capsule and it is important that all four bolts are fully fitted within 10 minutes of each other: Over-drilling the bolts can cause the resin to be drawn up out of the holes, weakening the bond, and taking too long on this stage can cause the resin to begin setting, causing problems with alignment. If you are using a rechargeable drill, ensure that you are not low on charge.

   If you engage the hexagonal rod into the head of each bolt and then carefully offer it up to the end of the glass capsule, you will find that you can rest it gently on the capsule whilst changing your grip to hold the drill firmly and vertically.



   Then run the drill at low speed with rotary hammer action whilst pushing down firmly so that the glass capsule breaks and the bolt *screws* itself into the resin, mixing it as it spins. The glass breaks easily so this is a lot easier than it sounds ☺

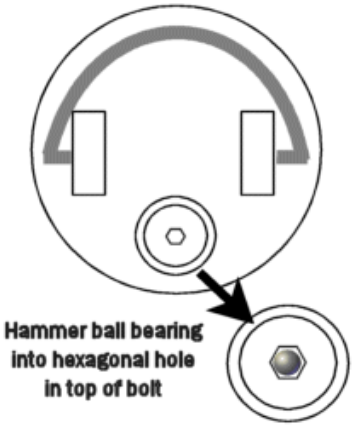
   You may find it convenient to hold the anchor in place with your feet as you drive each bolt into position.

   Repeat this sequence promptly for all four bolts, rotating the top plate on the ground anchor to gain access to each of them.

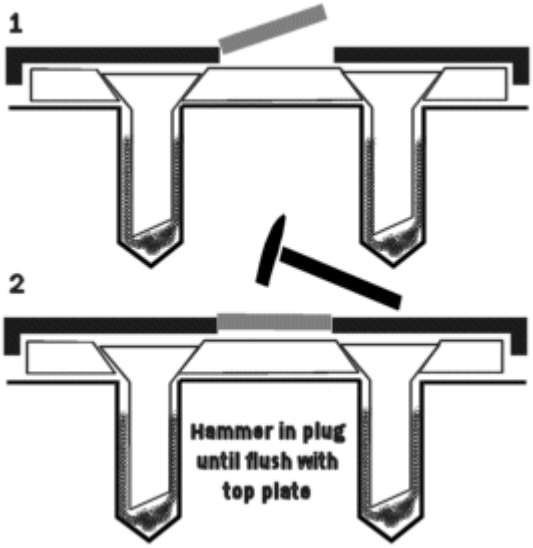
10. **Check all four bolts are fully home:** Once you have driven all four bolts into their holes, rotate the top plate again as you check that they are all fully home and in contact with the base plate of the ground anchor. Do not expect the ground anchor to be held very tightly against the floor – that is not important to the security of the fitting. Slight alignment errors do not

have a significant effect on strength. If any bolts have pulled out slightly, you can drive them home with a couple of turns with the drill. Again, do not over-drill them.

11. **Insert the ball bearings:** This is optional but is recommended for maximum drill resistance. Before the resin sets, you can hammer one of the ball bearings supplied into the hexagonal head of each bolt. You may find the M8 x 50mm bolt is useful as a *punch* to reach the bolt heads – the end of the bolt has a slight dimple that will locate on the ball bearing. The ball bearings are a very tight fit so it will take a few hammer blows to drive them into the bolt heads. Be careful not to hit your fingers! ☺ It is important that the ball bearings are hammered sufficiently into the bolt heads so that they don't obstruct the rotation of the top plate.



12. **Insert the plug into the top plate:** Once all four bolts and optionally ball bearings are in position, you can block off the access hole in the top plate with the blanking plug supplied. The plug has a slight taper on its edge so it is important that it is inserted the right way: The smaller side is marked with an 'X' and this should face towards the anchor base plate. Rotate the anchor top plate so that the hole is *not* above any of the bolt heads. Carefully place the edge of the plug against the edge of the hole in the top plate such that the top of the plug is 1-2mm above the plate surface. Then lower the other side of the plug into the hole so that it is slightly proud of the top plate and parallel with it. Use a hammer to carefully tap the plug into position – it should rest flush with the top plate. The plug is a tight fit so take care not to hit your fingers.



13. **Leave the anchor undisturbed while the resin sets:** We recommend that you leave the anchor overnight to ensure the resin is fully hardened before using it. Do not disturb the anchor during this period.

14. **The installation is complete once the resin has set. Well done ☺**

Using a Torc Ground Anchor

A properly installed anchor should give you many years of trouble free service.

Remember that you must use an appropriately fitted Sold Secure-approved lock and chain to be confident in your security provisions.

The only maintenance required by the anchor is an occasional drop of oil on the pivots for the shackle. Do not use chrome polish.

Concrete Fixing Queries

What About the Damp Course in my Floor?

The chemical resin anchors re-seal the damp course as the resin hardens.

What if you have Poor Quality Concrete?

Any anchor is only as good as the substrate that it is fixed to. The Torc anchor uses chemical resin anchors for floor fixing because they cope better with poor quality concrete. The Torc anchor uses 4 fixings to increase resilience further and these are positioned near the outside of the anchor to maximise security.

If you are concerned about the quality of substrate then please contact your supplier for advice. Since this is a DIY-installed product and we have no control over the quality of the substrate, we are unable to provide any warranty on the solidity of the mounting. You should be confident that your substrate is adequate for your needs.

What if the Concrete isn't Thick Enough?

If you find you are drilling into mud, sand or any other loose material, you should find an alternative location with better concrete or switch to an alternative fitting kit (e.g. brick wall). The Sold Secure approvals and any product warranties do not apply to any non-standard fittings and you are strongly recommended to find a location with a good substrate. However, if you really have no choice about the location and it is not possible to re-concrete the area, you *may* be able to fill a hollow with a larger quantity of resin from a cartridge system instead of the resin capsules supplied but this is not recommended because it may still achieve a weak fixing, it is difficult to get the quantity of resin accurate and it is therefore vulnerable to bonding the top plate to the base plate so that the anchor no longer rotates! Suppliers of resin cartridges include Screwfix (www.screwfix.com, part number D16180 or similar, and applicator D13246). Follow the instructions supplied by the manufacturer. Again, you should be confident that this is adequate for your needs.

Does the Resin Have a Shelf Life?

We recommend that you install the product within one year of purchase. Test results on the resin capsules have revealed no installation problems and no loss of performance after 15 years.

The resin capsules should be kept out of direct sunlight. Always check that the resin flows like honey in its capsule before use.