

QUICK START GUIDE: Beaker Sampler

This guide serves as a quick reference for operating the Beaker Sampler. It is for your convenience and is not intended to replace the information found in the Operations Manual provided.

Preparing Sampler for use

Connect vacuum pump to hose of cutting head & depressurise membrane in cutting head completely. Dip piston & cutting head in water to allow piston to move more freely in sampler. Push & twist piston into cutting head, with rubber scrapers first.

Important: Position hole for piston rod directly opposite one of the strips in cutting head frame so strips of this frame, central bolt & hole are all lined up.



Taking care not to damage piston rings, carefully push & twist sample tube & insert into frame. Place collar at top of frame. Check that piston rod & hole are in line, if not rotate collar by 180°. Tighten wing nuts firmly & check tightness of these after taking each sample.



Push piston rod through collar & screw into piston loosely.



Using the sampler

Hang both pumps on your belt (pressure pump on right). Connect air extension hose to cutting head hose & pressure pump itself. Apply pressure (2 bars is enough) with pressure pump & check that pressure does not fall. Piston is now fixed tightly into cutting head & will not slip when sampler is being lowered so you can be sure that you are taking a sample from desired depth.

Make sure that you release pressure before taking a sample!

Hook the non-stretch rope to the piston rod.



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Add a maximum of 3 meters of extension rods to collar at any time but more can be added when lowering sampler into water. Use beating head for harder sediments, in case of doubt, fit T-piece with beating head.



Taking the sample

Lower sampler, making sure hose connector does not get caught. When sampler feels lighter, you have reached the solid bottom ("nautical depth"). Depending on how much thin sediment ("thick water") you expect, pull sampler upwards & a little to one side, so you do not cut into hole you have already disturbed & cloudy water above it.

Pull piston cord tight & fix securely. Piston will remain at this height.

Disconnect hose from pressure pump. Sampler may sink down under its own weight. Push sampler down further. If you do not achieve the desired sample length in this way, then take impact absorbing hammer & drive cutter further into bed.

N.B: Do not hammer too much as you will have to pull cutter out of sludge yourself!

If working in a strong current or at considerable depth (> 5 m), you should not push too hard. Drive sampler into bed with hammer strokes (or brief pushes with the arms) to prevent bending or distortion of rods.



Once required depth is reached replace air hose in pressure pump & apply 2, to no more than 3 bars pressure. Gradually pull sampler upwards in a straight line.

Dismantle extension rods two by two & shake rods backwards & forwards slightly so screw connections will become loose. One extension rod can be left in place without causing problems. "Row" sampler through the water to rinse it off.

Place sampler more or less vertically in a bucket (preferably filled with clean water) or on a clean surface. Clean outside of sampler with brush so you can see if you pulled sampler far enough upwards before starting to take your sample - (reasonably) clear water should be visible under piston.

Sediment gas that has bubbled upwards is also frequently visible under piston (or a layer of clay).

You can now describe the profile as it is seen from outside. Remember that any vertical smearing will make the description more difficult. Later, when the sample has been removed from the tube, you can open it out to examine it more thoroughly.