



# PRODUCT INFO:

## SAMPLING ABOVE and BELOW WATER USING CASING

The sampling procedure is:

1. Using the auger, incrementally sample 300mm deep each time until water is encountered then the disturbed saturated sand turns to a slurry and wont retain in the sampler. The auger actually cuts a hole slightly bigger than the casing.
2. Insert the casing to the bottom of the hole with the casing cutter on the bottom and then attach the Casing Clamp about 500mm above the ground level. Push down on the Casing Clamp and rotate the Casing clockwise only to start the incremental penetration. Try to get the casing 100mm of penetration.
3. Attach the Sludger/bailer to the Extension Rods that were previously used to make the hole and using an up and down movement of about 300mm strokes and making firm contact with the bottom of the hole on the bottom of the down stroke to pump the slurry into the Sludger/bailer past the ball valve. Sometimes the first 100mm is not fully saturated and it will be hard to get started so add some water or try prodding the bottom vigorously to stir up the sand into a slurry. Sometimes this partly unsaturated sand can block up the Sludger/bailer and it will need to be removed from the hole and washed out. Note – standard Sludger/bailers do not dismantle for easier cleaning, only the higher spec versions have the removable ends. As the Sludger/bailer is removed from the casing apply downward pressure and clockwise rotation on the Casing Clamp to gain more penetration. This process is continued incrementally until the desired depth is reached. In good sands a rope can be used on the Sludger/bailer instead of the extension rods which makes sampling quicker and easier.

Some alluviums have debris or gravel or even chemically bonded layers which cause problems. Layers of raw gravel are difficult to penetrate and if gravel is bigger than will pass into the Sludger/bailer then it needs to be pulverised or prodded and pushed out of the bottom of the casing and to the outside of the casing. We have Star Drills and Stone Catchers to help deal with gravel but it is a very slow and tedious process. Bigger casing with bigger diameter Sludger/bailers handle gravel better.