

Mineral Exploration Equipment

Van Walt Ltd has been supplying equipment for soil and water research for the past 30 years



More recently some of our equipment has proved to be very beneficial for companies involved in mineral exploration and this broadsheet explains the uses of some of our sets for this purpose.

Hand augers:

The usefulness of hand augers should not be underestimated. They have many benefits but also some disadvantages:

Advantages:

- Light and highly portable
- Can be used by untrained operatives
- Durable
- Can be used by one person
- Very cheap.

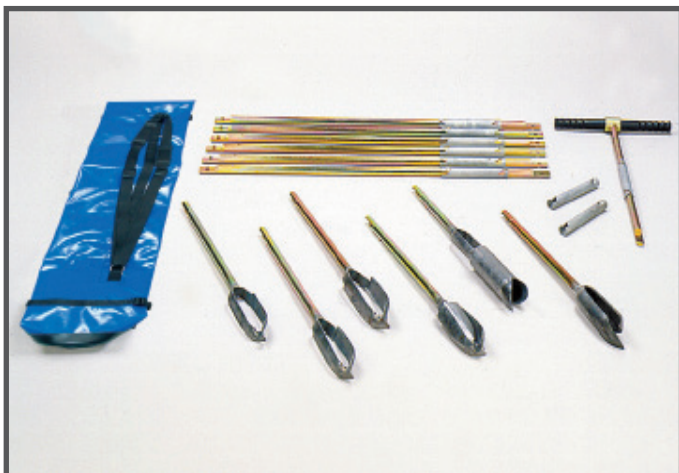
Disadvantages:

- Soils samples are disturbed
- Relatively more time consuming than motorised devices
- Not suitable for extensive repetitive sampling to depths beyond 2-3 metres
- Not very good in hard or stony soils.

Two sets are good for mineral exploration:

Basic Auger Set (0116)

General Set (0111SO)



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Window Sampling

Window sampling is a technique whereby steel tubes (with cut out windows) are driven into the soil with a mechanical (petrol, electric or hydraulic) hammer and extracted manually or hydraulically. The samplers will show a virtually undisturbed horizon for logging and (sub) sampling. Depending on geology they can achieve sampling depths of up to 10 metres although more realistically, if used day in day out, are very suitable for repetitive use to 6-8 metres. A different type of attachment can also be used to retrieve the samples in a liner.

A typical window sampling set to achieve depths of 6 metres will weigh in the region of 200 kg with the heaviest item being the hammer at 25 kg. As such it is a very mobile system which can be used in remote and difficult to access sampling points.

Our window sampling sets have been sold across the world to researchers, geologists, geographers and archaeologists to name but a few. More recently they have been used by mineral exploration companies who have found them of particular benefit in sampling to the saprolite horizon.



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Advantages:

- Very mobile and relatively light weight
- Produce virtually undisturbed samples for accurate horizon evaluation
- Low maintenance and high reliability
- Relatively low cost.

Disadvantages:

- Needs to be operated by two people
- Not suitable for drilling in rocky conditions.



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Micro Drilling Rig (MRZB)

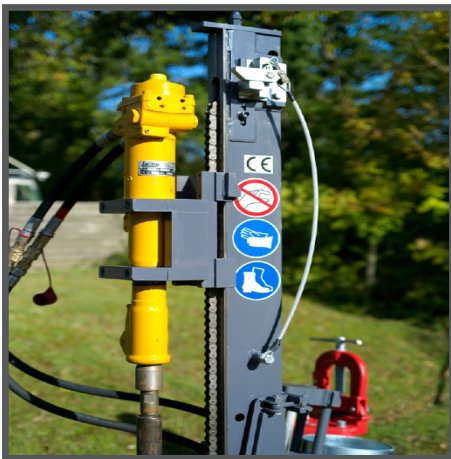
The MRZB is a powerful, fully hydraulic, track mounted, micro drilling rig which is capable of driving the window samplers to a depth up to 20 metres. The unit is powered by a petrol or diesel engine. At an all equipped weight of less than 750 kg it is small enough to be transported to remote sites; if need be by helicopter especially as some components can be made modular.

Advantages:

- Small, mobile and powerful
- Easy to operate because of its fully hydraulic functions.

Disadvantages:

- Not suitable for rock drilling
- Cannot work on steep slopes
- Higher cost
- Higher maintenance.



The Van Walt team has almost 30 years experience in sampling, monitoring and drilling in the research, mineral exploration, contracting, educational and environmental sectors. We are always pleased to help find the right equipment for a project and we support every purchase with onsite training and dedicated after sales service, wherever the location.

Training on our drilling equipment has taken place in the Democratic Republic of Congo, Ghana, Dubai, India, Spain, Ireland and extensively throughout the UK.