



Magnetic Measurements Portable Rock Drill MMPRD



INSTRUCTION MANUAL

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MMPRD Portable Rock Drill

The **MMPRD** is a lightweight portable drill weighing less than 5 Kg powered by a quiet, easy starting, powerful, reliable but lightweight 30cc Stihl two-stroke chainsaw motor driving water lubricated diamond tipped drill bits. The lightweight motor develops 1.2kW (1.6 HP) and drives through a special reduction gearbox giving optimal drilling speeds of up to 1500 RPM.

The optimum drilling speed for 1" diamond corers is about 1500 rpm in medium to soft rocks and about 1000 RPM for very hard rocks.

Larger corers, up to 2" diameter, can be used on hard rocks. For soft sediments corers of up to 4" diameter can be used but care must be taken to keep the drill vertical.

The **MMPRD** is controlled by a convenient finger trigger on the handle. The fuel tank has a large capacity allowing long periods of uninterrupted drilling.

Unpack the drill and check that you have the following: Drill Motor, combined spark plug spanner and screwdriver, 2 adjustable spanners, Stihl Operating Manual, Pressurised water container.

Read the Stihl manual for instructions on starting and running the drill. Be sure to use 50:1 petrol to oil mixture (see page 24 in the Stihl manual). Do not fill the chain oil tank (page 26) as this is only needed when the motor is used as a chainsaw.

For drilling rocks you will need a diamond tipped corer. Fill the pressurised water container with water. Screw in a diamond tipped corer and connect the water supply by pushing the quick-fit water connector on the flexible tube to the connector on the water jacket at the front of the drill. Pressurise the water and open the valve on the water jacket until water flows out of the drill bit. Close the tap, the water jacket now has water in it to lubricate the seals, operating the drill without water in the water jacket shortens the life of the seals.

Turn the water tap on until a small amount of water flows steadily out of the core barrel. You are now ready to start drilling.

Start at slow speed until the drill bit engages with the rock then increase the speed as you drill the core.

Once the core has been drilled, withdraw the drill and core barrel from the rock. Push a screwdriver down the side of the drill core to snap it off from the main rock

unit, the drill core can now be removed.

When you stop drilling disconnect the water container by squeezing the metal tab on the connector and pull the other half of the connector away from the drill.

Depressurise the water container by lifting the valve on the top.

For storage empty the petrol tank and start the drill to empty the carburettor of petrol (see page 35 of the Stihl manual). Empty the pressurised water container.