Pre-Use Instructions

WHAT YOU NEED

1) A HEAVY DUTY INDUSTRIAL DRILL (Most Home Depot / Lowes type supply stores do not stock this type of drill) with a full 1/2" or larger chuck which turns at a constant 300-450 rpm. Most of these drills are rated at 6 to 8 amps or more.

2) HEAVY DUTY EXTENSION CORD WITH GFCI RECEPTACLE to avoid any possibility of electric shock.

3) For DRILL PIPE we recommend 3/4" schedule 40 galvanized steel water pipe, cut and threaded into 4' to 10' joints depending on your drilling conditions. Some electrical contractors use 3/4" rigid conduit for drill pipe, but several have reported that the rigid conduit has sheared off the coupling resulting in a lost bit. IT IS **NOT** RECOMMENDED TO USE PVC or thin walled metal pipe, as it WILL shear off, leaving your bit in the hole. Also, avoid 1/2" pipe as it is not as stiff as the 3/4" and can "wander" under some conditions.

4) A GARDEN HOSE provides water to lubricate the bit and soften soil ahead of the bit.

5) A TORPEDO LEVEL is helpful to ensure that the bore is straight. If you keep the drill pipe level for the first 2 or 3 feet of the bore, the hole will remain true; after that, the only way to change the direction is to pull out and start over.

BEFORE YOU START

"Wear-in" the packing to prevent water leakage by connecting a water hose to the Borit Tool, attaching the drill chuck to the hex and slowly opening the gate valve. If water leakage occurs around the drive shaft at either end, tighten the cap screws slowly until the leakage stops. Operating the drill will help seat the packing. If excessive leakage appears while boring, minor tightening will stop it.

When Using the 4 3/4" Backreamer you must first drill through with the 2" or 3" bit. After you have drilled through remove the bit used and attach the 4 3/4" Backreamer and pull it back through, NOTE DO NOT CHANGE THE DIRECTION OF THE DRILL AS YOU MAY LOOSE THE BIT OR PIPING.

ON THE JOB (see “Operating Instructions” for additional information)

In most soils, Borit requires a little effort to push the bit through. However, gravel does not compress and takes more ‘push’ as does clay and compacted fill. Difficult boring may require more water and the use of a pry bar. Even under such difficult conditions, you should be able to bore about a foot a minute.

Don’t bore too fast or use too much water in extremely SANDY SOIL. Boring in sand is similar to building a ‘sand castle’; if the sand is too dry it crumbles, and if it’s too wet, it collapses. The rotation of the bit combined with the water from the hose will cause the sand to ‘bridge up’ and form the perfect hole. Experiment with how much water to use and how fast to push the Borit Tool. Start by just barely turning the water on with the ball valve and only boring 12 to 18 inches per minute. Too much water or pushing too fast can cause the sand to collapse on the drill pipe rather than forming a hole.

After completing the bore, remove the drill bit and attach the drill pipe to whatever pipe, wire, or conduit you wish to leave in the hole, and pull it back through as you pull out the drill pipe. Use various couplings as adapters to attach the drill pipe.

CAUTION

Do NOT reverse the drill, or the bit or drill pipe could uncouple. A piece of electrical tape over the reverse switch will remind the operator not to reverse the drill.

If an obstacle is hit that is smaller than a football, the water will soften the soil and the rotation of the bit will usually "jiggle" the rock until it’s forced aside. If your bit stops, keep the pressure on the bit as it sometimes takes 30 to 60 seconds for the water and the bit to do their work. If the bit becomes stuck in the debris, the sloped wings on the bit will help you pull the bit and drill pipe out of the hole. If the bit is severely stuck, you can sometimes pull it out with a “come along,” or a truck or tractor.

Experiment with the amount of water needed for your boring conditions. Start with a small amount of water and gradually increase or decrease the flow until you find the amount that works best for the soil you are boring. You do not want a flood of water coming back out of the hole. Dig a sump under the hole to catch any water that does flow out. On long bores it can be helpful to use a small sump pump to keep the water out the hole. Do not exceed 90 pounds of water pressure under any condition. Water pressure is not what makes BORIT work. Water is to lubricate the bit and soften the soil.

CARING FOR THE TOOL

After finishing the job, spray WD-40 through the opened ball valve and run the drill for a few moments. A little WD-40 on all exposed steel parts will help prevent rust. With a little care, your BORIT tool will be ready for the next bore.