

4 ELEMENTS OF EFFECTIVE DRILLING: W.A.J.P Water

When drilling with a wet core bit, one of the most important factors is water. Many drillers misleadingly think the more water used, the better. As the diamonds work on grinding away the concrete, water helps form a concrete 'soup' called slurry that actually helps the grinding process by keeping the diamonds exposed. If there is not enough water, there isn't anything to create the slurry and the diamonds will continue to grind the same particles. If there is too much water, all of the concrete dust particles will wash away with nothing to help keep the diamonds exposed. The best amount of water to use is when you see the slurry look like heavily creamed coffee. This consistency proves to be the most effective when wet core drilling.

Anchor

Proper rig anchoring is essential to insure a straight core. The best method of anchoring is using physical anchors rated for core drilling. Using a base vacuum is fine as long as the surface is smooth and the vacuum gasket is in good shape. It is never recommended to vacuum a rig to a wall due to unreliable job site power. Many rigs also have a ceiling jack that allows the driller to shore the top of the mast up to an overhead area with a sturdy piece of wood. Never stand on a rig to hold it down. This is an unsafe practice. Standing on a rig causes a 'ribbing' effect on the core and will eventually cause the bit to bind up in the hole.

Speed

Setting your motor at the correct R.P.M. could mean the difference between grinding properly and glazing the diamond segments. Every core bit should be run at the proper R.P.M. The smaller the bit, the faster the R.P.M. should be set. These ratings are standard with almost all manufacturers and many core drills have multiple settings so you can use different size core bits on the rig. (see page 31 for core bit RPM charts)

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In order to maintain the correct R.P.M., you need the power to do the job. The majority of core drills out there are electric powered. It is best to use an amp meter when electric drilling to monitor the gauge and ensure you do not cause a loss of productivity. Keeping the motor bogged-down and the gauge in the red can wear the internal components of your electric drill motor. Also, insufficient power can rob the core bit of its R.P.M. and the ability of the diamonds from being exposed. This can also be said when drilling with a hydraulic motor. It is important to maintain the correct gallons per minute to ensure the correct R.P.M.