

CORE BARRELS

Core Barrels are essential tools designed to expedite the removal of rock and ensure the straightness of drilled shafts. Utilizing a core barrel to core rock before employing a rock auger or rock drill bucket can significantly increase production. Moreover, if you encounter a drilled shaft deviating from its intended alignment due to sloped rock, boulders, obstructions, etc., a core barrel can be an effective solution to help regain proper alignment.

How Core Barrels Work

Core Barrels operate by making a preliminary cut along the perimeter of the planned shaft diameter. This process reduces the volume of material that needs to be removed, and releases pressure within the cored area, speeding up the drilling process. For shafts with diameters smaller than 6 feet, it is sometimes possible to extract an actual core. Achieving this is not only exciting but also significantly reduces drilling time.

It's crucial to understand the relationship between the number of teeth on the core barrel and the downforce exerted by the drill rig. The distribution of weight to each tooth is a key factor in efficient drilling. Having too many teeth can diminish the downforce applied to each tooth, leading to decreased efficiency. Conversely, too few teeth can result in excessive wear or damage to the teeth, as they endure too much force with each penetration into the ground.

Core Barrel Application

The photo on the right shows coring completed utilizing ECT tooling on a 9-foot diameter shaft, highlighting its superior effectiveness and efficiency in challenging conditions and successful use in large-scale construction and engineering projects.



This 9-foot diameter shaft under the George Washington Bridge cored using ECT Core Barrel.

