



## *Static/Hydraulic Pipe Bursting*

In the static pull system, no hammering action is used, as a large pull force is applied to the cone-shaped expansion head through a pulling rod assembly or cable (winch) inserted through the existing pipe. The cone transfers the horizontal pulling force into a radial force - breaking the existing pipe and expanding the cavity providing space for the new pipe. The steel rods are inserted into the existing pipe from the pulling shaft. The rods are connected together using different types of connections. When the rods reach the insertion shaft, the bursting head is connected to the rods and the new pipe is connected to the rear of the head. A hydraulic unit in the pulling shaft pulls the rods one rod at a time, and the rod sections are removed. The bursting head and the new pipe are pulled with the rod or the winch fracturing the existing pipe and pushing the debris to the surrounding soil. The process continues until the bursting head reaches the pulling shaft, where it is separated from the new pipe. If a cable or winch is used instead of a rod assembly, the pulling process continues with minimum interruption, but the force available for the operation is less.

Roller blade cutting wheel assemblies allow bursting of non-fracturing types of pipe such as steel and ductile iron water pipes and ductile iron repair clamps. Due to the use of a bursting head or a roller blade cutting wheel assembly, static pipe bursting systems can burst both fracturable and non-fracturable (i.e malleable) host pipe materials. Static pipe bursting systems have the ability to tow in a variety of new product pipe (i.e. HDPE, fusible PVC, restrained joint PVC, ductile iron, clay, etc.).