What is Pipe Bursting?

The breaking of an existing pipe, and expanding the broken pipe into the surrounding soil while simultaneously pulling in new pipe behind a bursting head.
Pipe bursting is a proven trenchless rehabilitation process.

Excavation is required for sewer service pits, entry pits and exit pits (if required).

New Factory Manufactured Pipe is installed, not a liner or coating.

Bursting follows the existing line and grade of the existing pipeline.
Types of Existing Sewer Pipe
Materials that can be burst.

- CI (Cast Iron)
- PVC
- Clay tile (VCP)
- Concrete (CP)
- Reinforced Concrete (RCP)
- Ductile Iron (DI)
- Asbestos Cement (AC)
Types of New Sewer Pipe Materials for Pipe Bursting

- HDPE
- VCP (No Dig)
- FPVC (Fusible PVC)
- Ductile Iron (DI)
PIPE BURSTING METHODS

1. PNEUMATIC (*Powered by an Air Compressor*)
   - Used mainly for Sewerline Installation

2. STATIC (*Powered by hydraulic power unit*)
   - Used for Waterline or Sewerline Installation
Pipe Bursting Method Usage

80% PNEUMATIC

20% STATIC
PNEUMATIC Pipe Bursting Tool

- Provides kinetic energy
  - Front Mount

- Rear Mount
Constant Tension Winch

- Keeps constant tension on tool
- Assists in overcoming pipe friction
Pipe Bursting Heads

- Breaks existing pipe
- Expands surrounding soil
- Pulls in new pipe
- Developed for manhole exit projects
- Eliminates need for receiving pit
- Design works best for size for size or 1 upsize replacement
- Tool is protected inside the HDPE
• Pilot acts as a forming mandrel reducing pipe plowing

• Pilot often needed when soil plugs develop or pipe fractures in front of burst head

• Pilots are recommended: Cast iron burst jobs & Multiple upsize projects
• Recommended when tool size/energy must be larger than new pipe diameter
• Used when doing multiple upsizes
• Compact soil or deep projects
Typical Pneumatic Job Site Layout (cont.)

- Manhole in intersection
- 8” Sewer mainline
- Residential Sewer Services
Typical Bursting Process (cont.)

- Excavate & Shore Entry/Exit Pits
- Excavate & Shore Sewer Service Connections
Typical Bursting Process (cont.)

- Fuse HDPE
Typical Bursting Process (cont.)

✓ Set up Winch & Install Pulling Cable
Typical Bursting Process (cont.)

✓ Attach Bursting Tooling to Cable
Typical Bursting Process (cont.)

✓ Attach Bursting Tooling to Cable

- New Pipe
- Bursting Head
- Hammer
- Hammer Link
- DUCT TAPE
- Cable
Typical Bursting Process (cont.)

✓ BURST AT LAST!
Typical Bursting Process (cont.)

✓ Bursting Head Arrives in MH.
Typical Bursting Process (cont.)

✓ Air test Sewerline
Typical Bursting Process (cont.)

✓ Reconnect Sewer Services
On Location: Roswell, NM

Project: Adkinson Sewer Rehabilitation
Upsize: 3,370’ of 15” VCP to 20” HDPE & 2,400’ of 12” VCP to 18” HDPE

Equipment: 20 Ton Winch, 16” HammerHead Mole, Rear Mounted Pulle 20” & 18” bursting heads
On Location: Jemez Springs, NM

Project: SewerLine Rehabilitation
Upsize: 1,512’ of 8” PVC to 8” HDPE
Equipment: 8 Ton Winch, 7” HammerHead Mole, Front mount burst head, manhole exit
On Location: Prescott, AZ

**Project:** Ruth Street and Demerse Sanitary Sewer Rehabilitation of Sewermain and Residential Services

**Upsize:** 7,039’ of Existing 6” VCP to 8” HDPE & 4” VCP to 4” PVC

**Equipment:** 12 & 20 Ton Winch, 7” HammerHead Mole, Front mount burst head, manhole exit