ACME TRENCHLESS

Pipe Pulling equipment built for the **L**ead **S**ervice **L**ine **R**eplacement Professionals

The Acme Pipe Winch
The Acme Suction Machine
Acme Re-Usables

- Leader Cables
- MAX 7/16 Pulling Cables
- Splitter Heads
- Pulling Lugs

Pipe Pulling is the most widely accepted and preferred trenchless excavation technique used to replace lead water lines. Successful contractors and municipalities embrace trenchless, understanding the value of avoiding the disruptive open cut to streets, terraces, and front yards and the time consuming and expensive restoration.

When it comes to pulling lead or galvanized water lines, the mini excavator and the Acme Pipe Winch make the perfect combination.

Maneuverability and light weight make the mini excavator the machine of choice when performing urban utility excavation. But when it comes to using the mini excavator for pipe pulling, it may not have the traction force or stick breakout force required to make the pull. Do not bring in larger equipment, combine the mini excavator with the Acme Pipe Winch to get the job done.

The **ACME PIPE WINCH** (patent pending) is the preferred pipe pulling machine to help you achieve trenchless success, it:

- Has the **pulling power** required with a rated line pull at 20,000 lbs.
- **Preserves the original bury depth** of the water line as the pull is made at a horizontal plane to the existing line.
- **Is safe**, as the tensioned pulling cable remains within the confines of the winch frame and the access pit during the pull.

ACME TRENCHLESS

The **Acme Pipe Winch** is a robust, easy to use machine designed to simplify the process of pipe pulling. In use, a pulling cable is fed through the existing lead water line which acts as a conduit. A pulling lug or splitter head is attached to the distal (basement) end of the pulling cable and engages the lead line while the proximal end of the cable is fastened to the drum of the Acme Pipe Winch. As the cable is pulled through, it tows in the new copper or poly pipe.

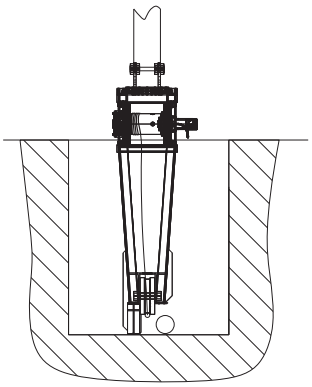
THE ACME PIPE WINCH ADVANTAGES:

- ***Powerful*** — The Acme Pipe Winch applies a powerful pulling force of over 20,000 lbs. directly to the pulling cable. It can be hydraulically powered by your excavator or backhoe.
- ***Compact*** — Pulling water lines with the Acme Pipe Winch requires a very small excavation. It attaches to your mini excavator via a quick coupler and will dispatch to the access pit at any approach angle to engage with the existing lead line.
- ***Stay in Spec*** — The Acme Pipe Winch engages the existing lead line at its original bury depth and pulls in a straight horizontal plane, preserving the original bury depth. Compare this to pulling a cable with a backhoe or excavator with a cable clamp, where the pulled pipe will permanently migrate upwards due to the steep angle of the pulling cable during the pull.
- ***Quick Plumbing Connections*** — Interior plumbing hookups are expedited as the new water line has landed to the same location as the original line. And the floor patch work is also minimized.
- ***Safer*** — During the pulling operation, the tensioned pulling cable remains safe inside the confines of the winch frame and the excavated access pit. Compare this to the crude method of pulling the cable with a clamp and an excavator or backhoe, and the pull finishes up with the excavator or backhoe and the tensioned cable in the traffic right of way.
- ***Economical*** — The pulling cables are not consumables, they are reusables. After a pull, the Acme Pipe Winch drum is shifted to free-spool and the combined cable/lead line is removed. The cable is then slipped out of the decommissioned lead line. The cable goes back on the truck for the next job, and the lead can be sold to the recycler, qualifying as responsible disposal. Optionally, when the splitting method is utilized, after a pull the cable is free-spooled off the drum and then goes back on the truck for the next job.

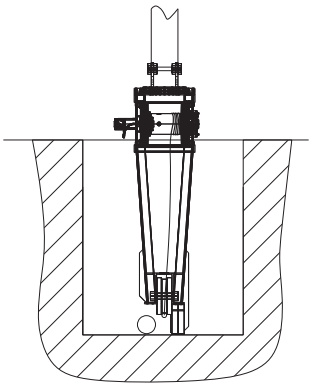
EXCLUSIVE TO THE ACME PIPE WINCH

You can utilize the benefits of the Acme Pipe Winch to pull a water line, even if excavation reveals it to be near a sewer lateral.

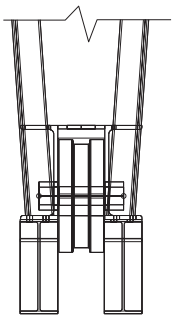
The sketches illustrate the different scenarios of water line to sewer lateral arrangements one may expose. The base of the Acme Pipe Winch can be easily field configured with use of hand tools to 3 different setups to afford clearance to a sewer lateral and still apply a powerful pull to the water line. Simply remove the left foot or the right foot and attach the face plate accordingly. If there is no sewer lateral close by, leave both the left and the right foot on and make the pull.

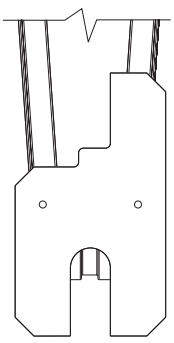


Scenario 1: Lead line on the left, close proximity to the sewer lateral to the right — remove the right foot, left foot on. Attach the face plate to match.



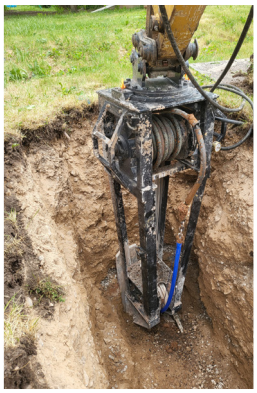
Scenario 2: Lead line on the right, close proximity to the sewer lateral to the left — remove the left foot, right foot on. Attach the face plate to match.



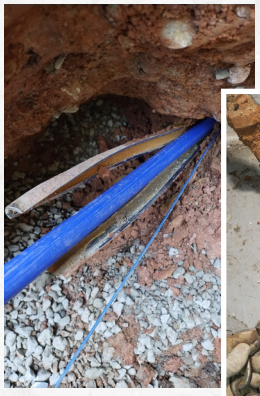


Scenario 3: If the sewer lateral is not in close proximity, both the left foot and right foot will remain on. Attach the face plate to match.

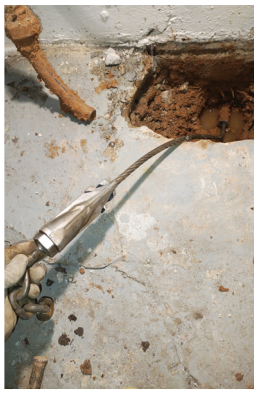
Pipe Pulling



Compact Design



Pipe Splitting



TO PULL OR TO SPLIT... YOU HAVE A CHOICE

When pulling lead water lines, you will choose between two different methods — you can either **pull** the lead line or **split** it. Both methods utilize a pulling cable which is landed in the existing lead line and engages at the distal end (basement) with a mechanical device, either a pulling lug or a splitter head. A pulling force is applied to the proximal end of the pulling cable outside with the Acme Pipe Winch, a backhoe, or excavator. Job site soil evaluation and past experience will steer your decision.

Pipe Pulling may be advantageous, as:

- This method removes the entire length of lead water line.
- Pulling can work well in soils that will allow the length of the old line to break free, such as moist, compressive soils made up of clay, silt, sand, fine gravel.

Or you can employ the **Pipe Splitter** which cuts the lead line into two halves as the cable is being pulled through.

Pipe Splitting may be advantageous, as:

- Splitting does not require the entire length of the lead line to break loose and be pulled.
- Splitting may require less pulling force.
- Splitting can work well in dry, hard soil made up of dense granular material.

Whether Pulling or Splitting, the Acme Pipe Winch will pull the cable in a the horizontal plane to the existing lead line, preserving the original bury depth and safely perform the pull within the confines of a short excavation.

THE ACME MAX 7/16 PULLING CABLES

The right pulling cable is integral to your success

When it comes to pipe pulling cables, bigger is better. Knowing that smaller cables break, and bigger cables are difficult to get landed in the old water line, we designed the Acme Pipe Winch and pulling cables around the best fit — a compact swagged MAX 7/16 wire rope. Our MAX 7/16 Cables are available in better and best grades with rated breakpoints of 24,300 and 28,600 lbs. respectively.

ACME PIPE WINCH

Hydraulic Pressure & Flow	2950 PSI at 20 GPM
Rated Line Pull	20,094 lbs first wrap
Pulling Cable Size	Up to 9/16"
Weight with Coupler Attachment	920 lbs
Overall Height	92"
Width at Base	13"
Width at 65" High	16"
Width at 72" High	33"
Bottom of Sheave to Top of Winch Drum	60"
Rotational Positioning	Full 360°, lockable in 5.6° increments

ACME MAX 7/16 PULLING CABLES

Better Grade, Rated Break Point *Import: Asia*	24,300 lbs
Best Grade, Rated Break Point *Import: Germany*	28,600 lbs

THE ACME SUCTION MACHINE

The Acme Suction Machine produces an extremely high positive displacement vacuum and is integral to getting the MAX 7/16 pulling cable landed to the LSL.

The Acme Suction Machine has proven its success in getting the pulling cable landed by using this 4 step process:

1. Evacuate the water from the LSL, and suck in a pull string.
2. Suck in 1 or 2 cups of biodegradable vegetable oil.
3. Tie the pull string to the 1/4" leader cable and pull it in.
4. Connect the 1/4" leader cable to the MAX 7/16 pulling cable and easily pull the cable in.

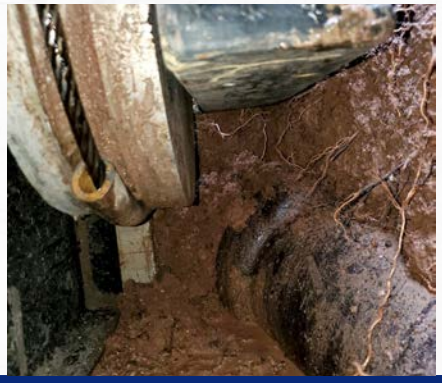
This commercial grade suction machine is designed specifically for LSL replacement, and consists of:

- A reliable GX 200 Honda engine powering a Roots PD RAI 24 Positive Displacement Blower capable of producing vacuum to 15 in Hg (204 in H2O)
- An air water separator, a final filter, a vacuum relief valve, gauge, and a fogging port.

The use of the Acme Suction Machine and the addition of a biodegradable vegetable oil in the step process simplifies the installation of the MAX 7/16 pulling cable which is integral to your pipe pulling success. Safely produce suction without the use of 120V AC electricity in the excavation.

ACME SUCTION MACHINE

Power	Honda GX 200
Suction	Howden Roots 24 URAI Rotary Displacement Blower
Single Axle Cart Weight	165 lbs



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