

INSTALLATION GUIDE FOR HELICAL PIERS



Table of Contents

Survey Site.....	1
Pier Placements	2
Pier Placement Obstacles.....	3
Outside Excavation	4
Inside Excavation.....	4
Footing Preparation.....	5
Pier Pipe Installation.....	6-7
Bracket Attachment.....	8-9
Lift Assembly.....	9
Electric Pump Breakdown	10
6-Way Manifold Close-up.....	11
6-Pier Manifold Setup and Lift	11
Multiple Manifold Setup and Lift	12
Hydraulic Release	13
Inspections and Sign-Off of Completed Work.....	13

Survey Site

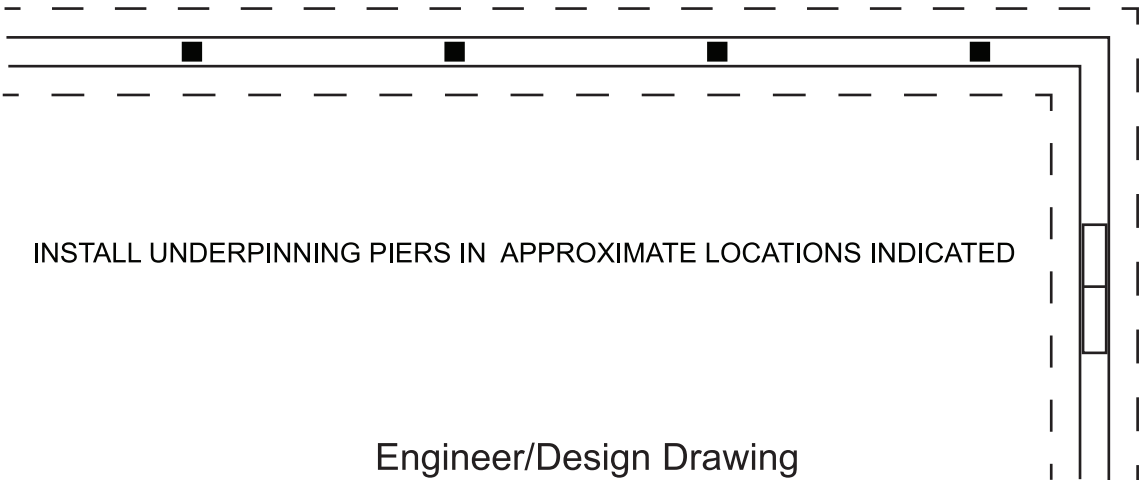
- ✓ Call 811, the national call-before-you-dig phone number, to request that the approximate location of buried utilities be marked with paint or flags so that you don't unintentionally dig into any underground utilities
- ✓ Evaluate and record Benchmarks for your job, (An established elevation i.e. Manhole Cover, Fire Hydrant or Gas Meter)
- ✓ Check local laws and regulations regarding licenses and permits
- ✓ Follow all guidelines set by the Occupational Safety and Health Administration (OSHA)
- ✓ Identify and overcome obstacles
- ✓ Take before and after photos
- ✓ For additional product information visit us at getecp.com



Helical Placement

Helical layout should follow Engineer or design drawings
Be aware of the obstacles the structure may have

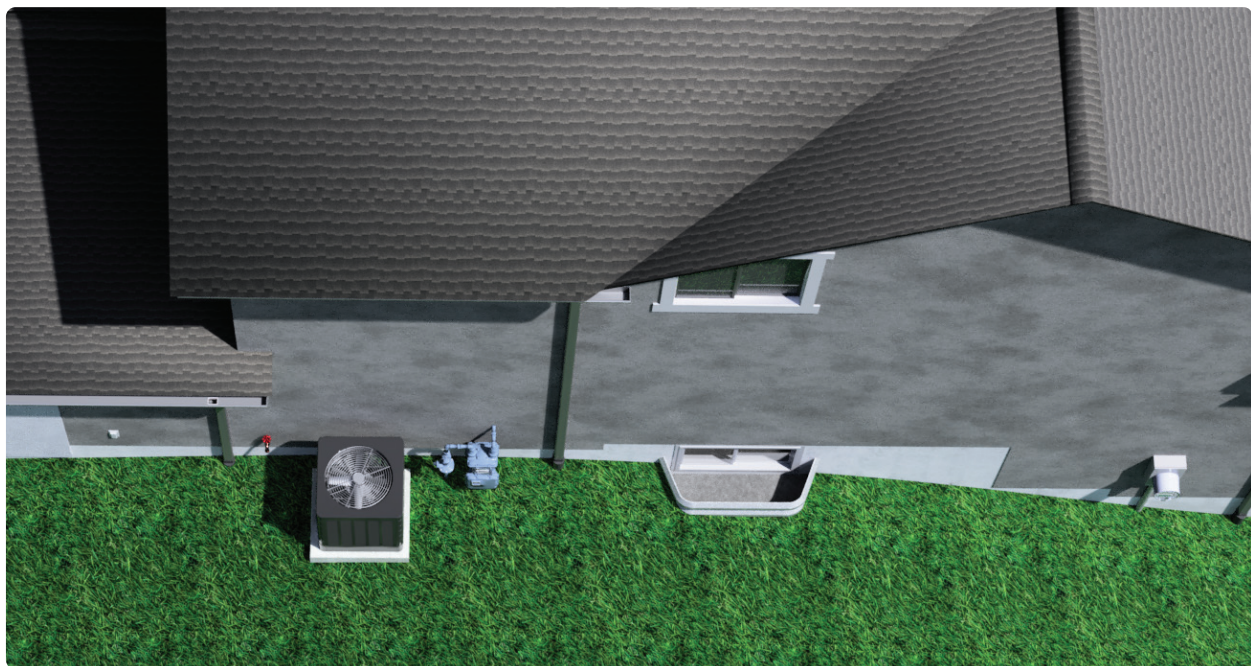
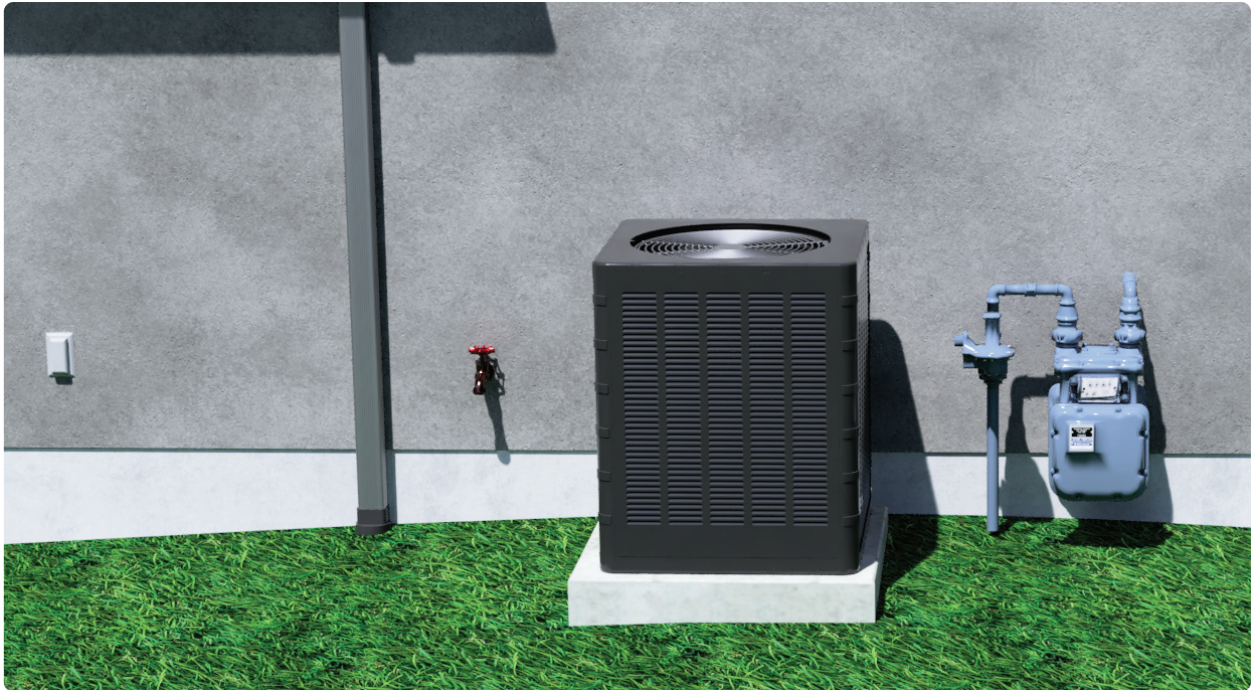
- Electrical Outlets
- Gas Meter
- AC Unit
- Water Spigot
- Downspouts
- Bay Windows
- Window Brick Ledge
- Offset Brick
- Overflow Brick Mortar



Helical Placement – Obstacles

Helical placement obstacles can be addressed by using the following solutions:

- Place plywood against brick to avoid unnecessary damage
- Use portable gear motor when installation areas are confined
- Helical Piers install at a 5° batter



Outside Excavation

Outside foundation preparation - strip excavation or individual helical pier location.

- Strip Excavation (Trenching) – dig a 3'wide trench along the entire length of wall until you reach the footing
- Individual Helical Pier Excavation – dig 3' x 3'square away from foundation wall until you reach footing



Inside Excavation

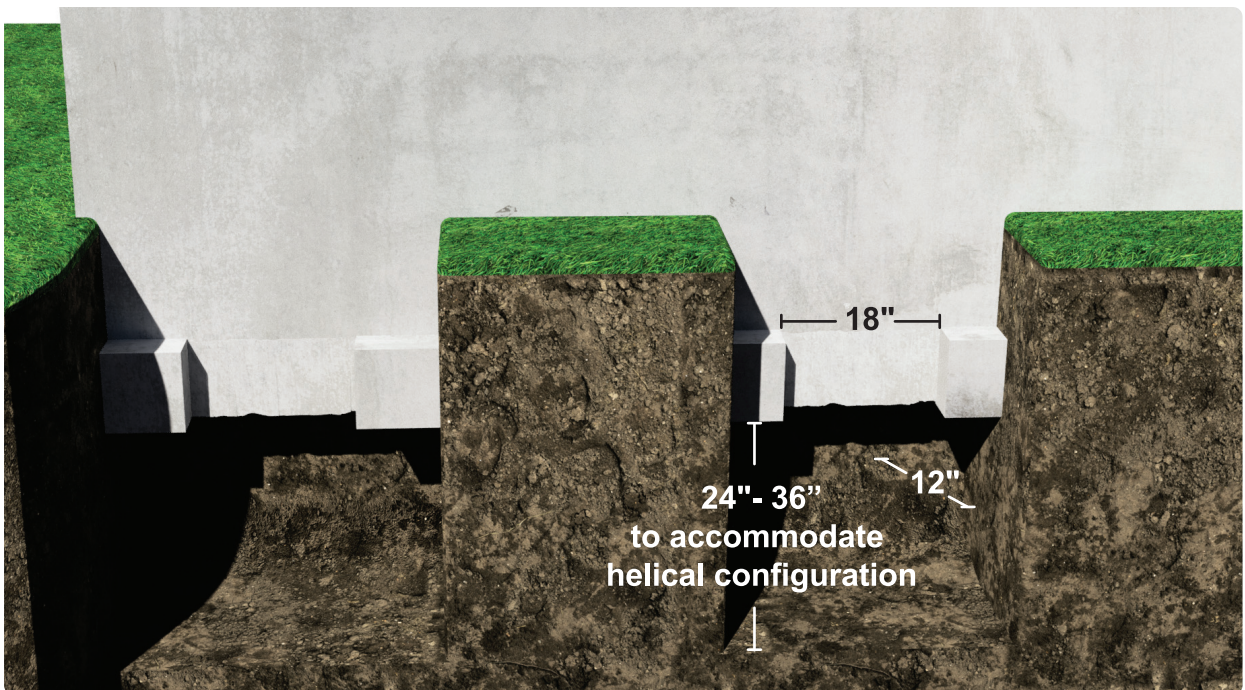
Inside foundation excavation

- Remove concrete floor in a 3' x 3' square away from the foundation wall
- Cut all re-bar or wire mesh in concrete floor
- Remove concrete debris inside of basement
- Dig soil for helical pier placement



Footing Preparation

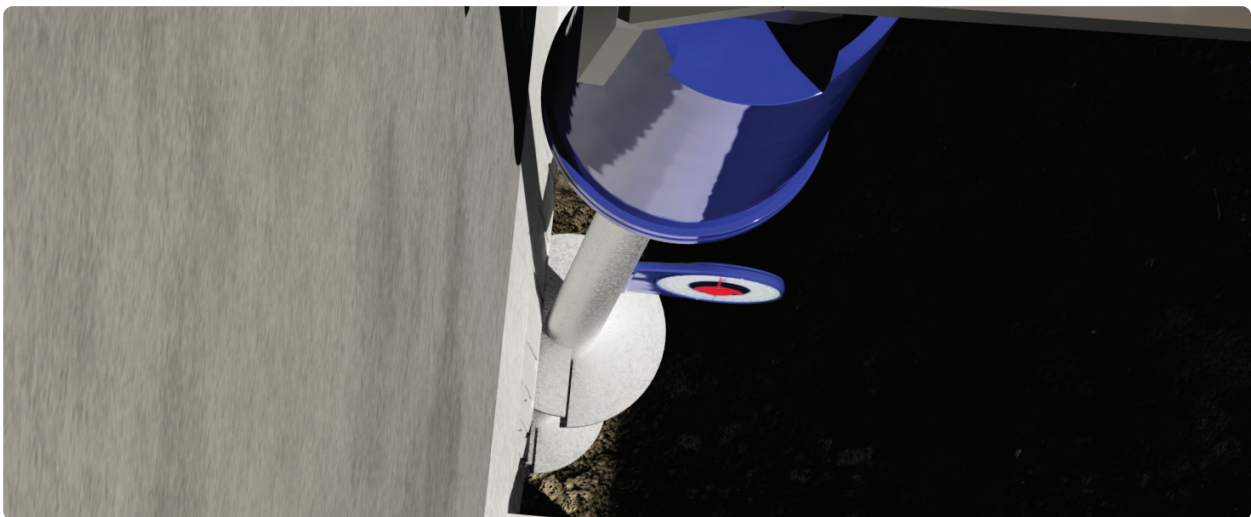
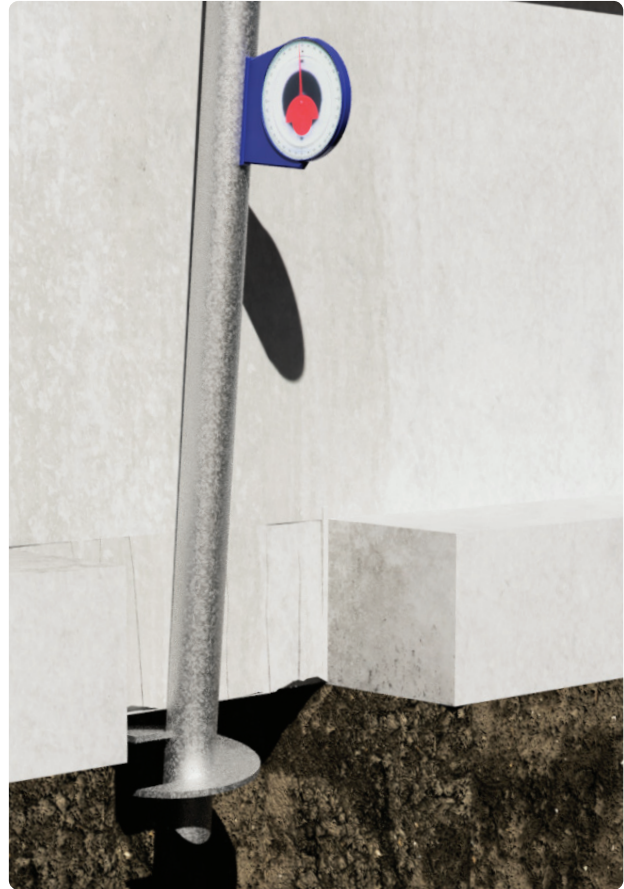
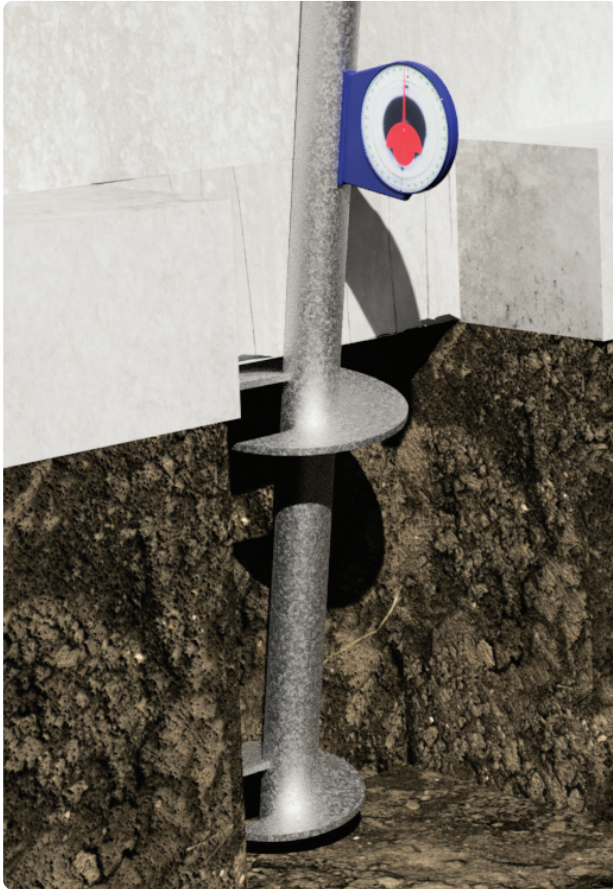
- Do not dig underneath until footing has been removed
- Remove 18" section of footing back to the wall
- Remove soil until last helical flight is below structure
- If rebar becomes exposed, consult with a professional engineer



Helical Pier Installation

Helical Pier Installation for either single or double flights

- Insert Starter section into the hole and attach Drive motor
- Ensure that the top flight is below the footing and the helical shaft is touching the foundation
- Check Drive motor for clearance



Helical Pier Installation

Helical Pier Installation for either single or double flights

- Align the helical starter with a 5° batter to the structure while advancing
- Start Drive motor rotation in a clockwise motion
- Remove drive motor, add an extension and re-attach drive motor
- Continue advancing helical pier until desired torque is achieved for the final 3'



Bracket Attachment

Helical bracket needs to be dropped over extension with face-plates turned toward structure Rotate bracket 180° under structure

- Lift bracket until secured under structure and measure 4" above the top of the bracket, mark extension
- After extension is marked lower bracket and cut extension
- Lift bracket back up and attach to footing



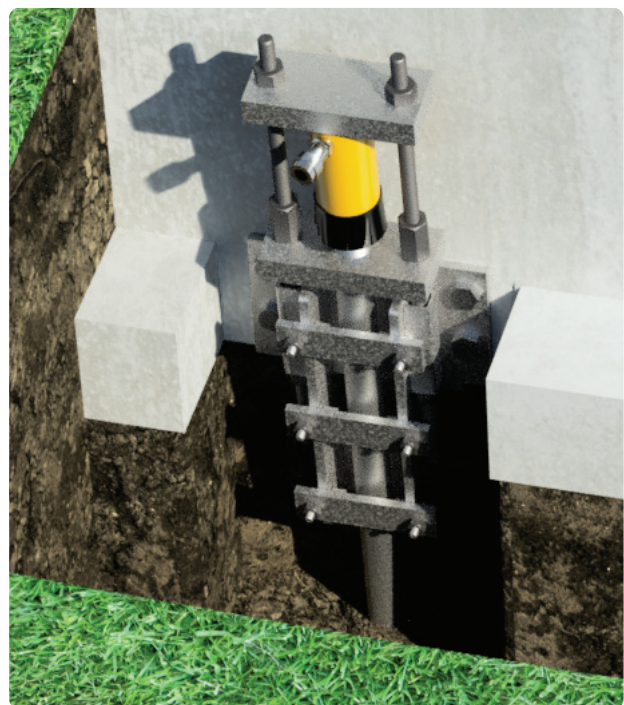
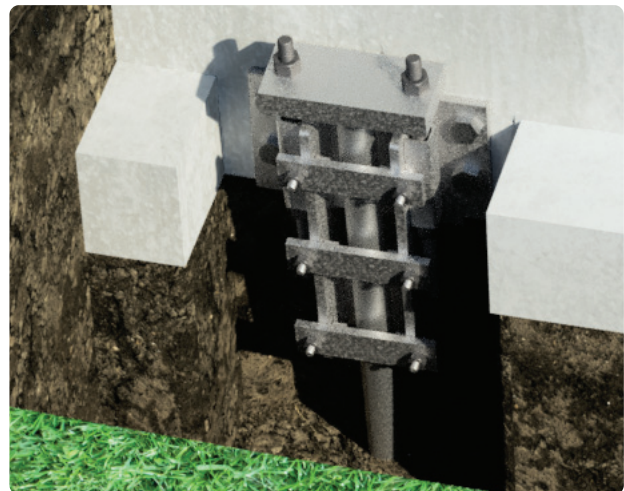
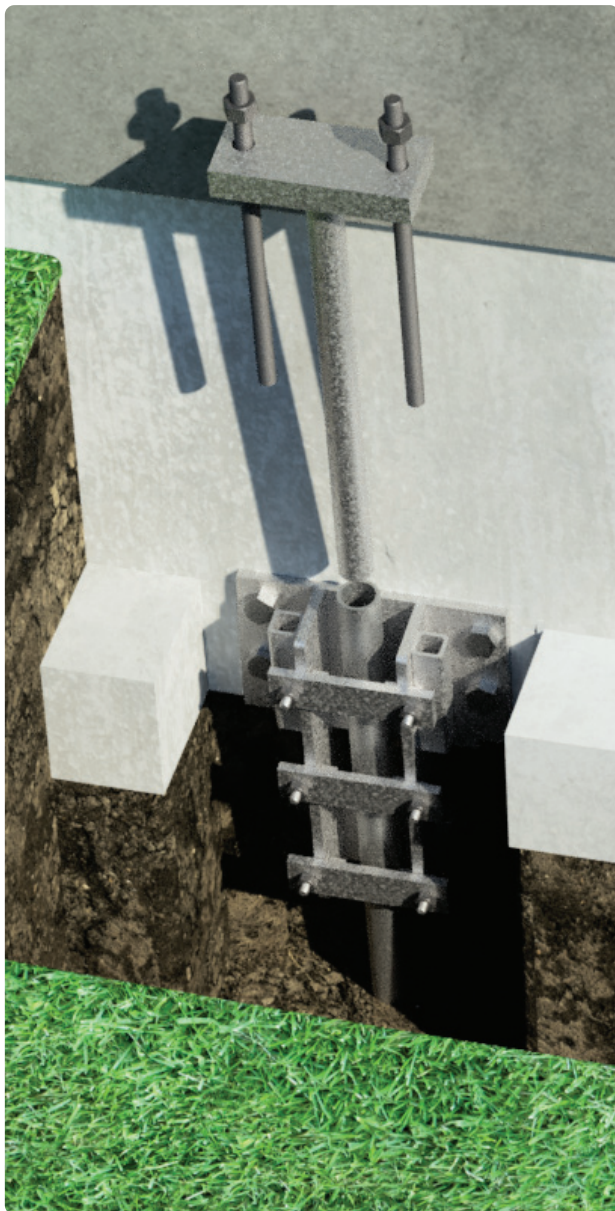
Bracket Attachment

- Install threaded rods and t-tube
- Attach nuts to bottom and top of the all threaded rods and tighten

Lift Assembly

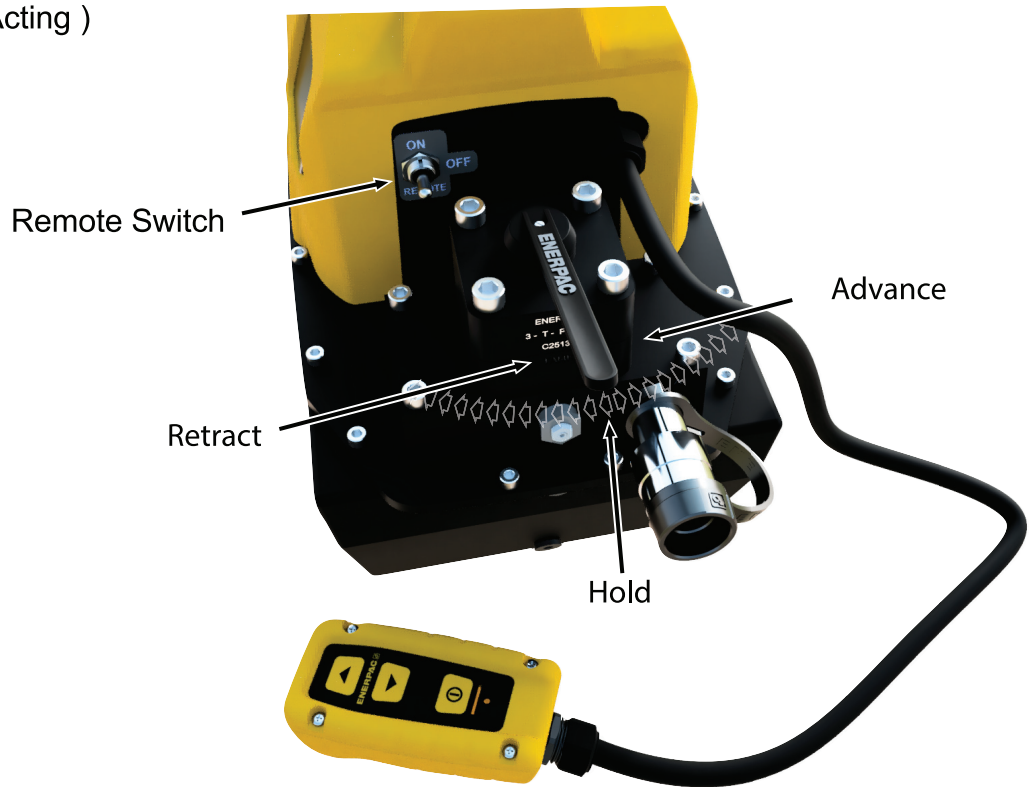
- All lift assemblies are designed to use Enerpac HYD-254 25-Ton Cylinder
- SUB - MUB - LUB (Small, Medium and Large Utility Brackets)

Secure couplers and B7 All-Thread
Add lift plate and heavy hex nuts
Add Hydraulic Cylinder and begin lift process



Electric Pump Breakdown

Electric Pump used to Lift
(Single Acting)



6-Way Manifold Close-up



Close-Up of the 6-Way Manifold

- To open the V-82 valves, turn the handles to the "left"
- To close the V-82 valves, turn the handles to the "right"

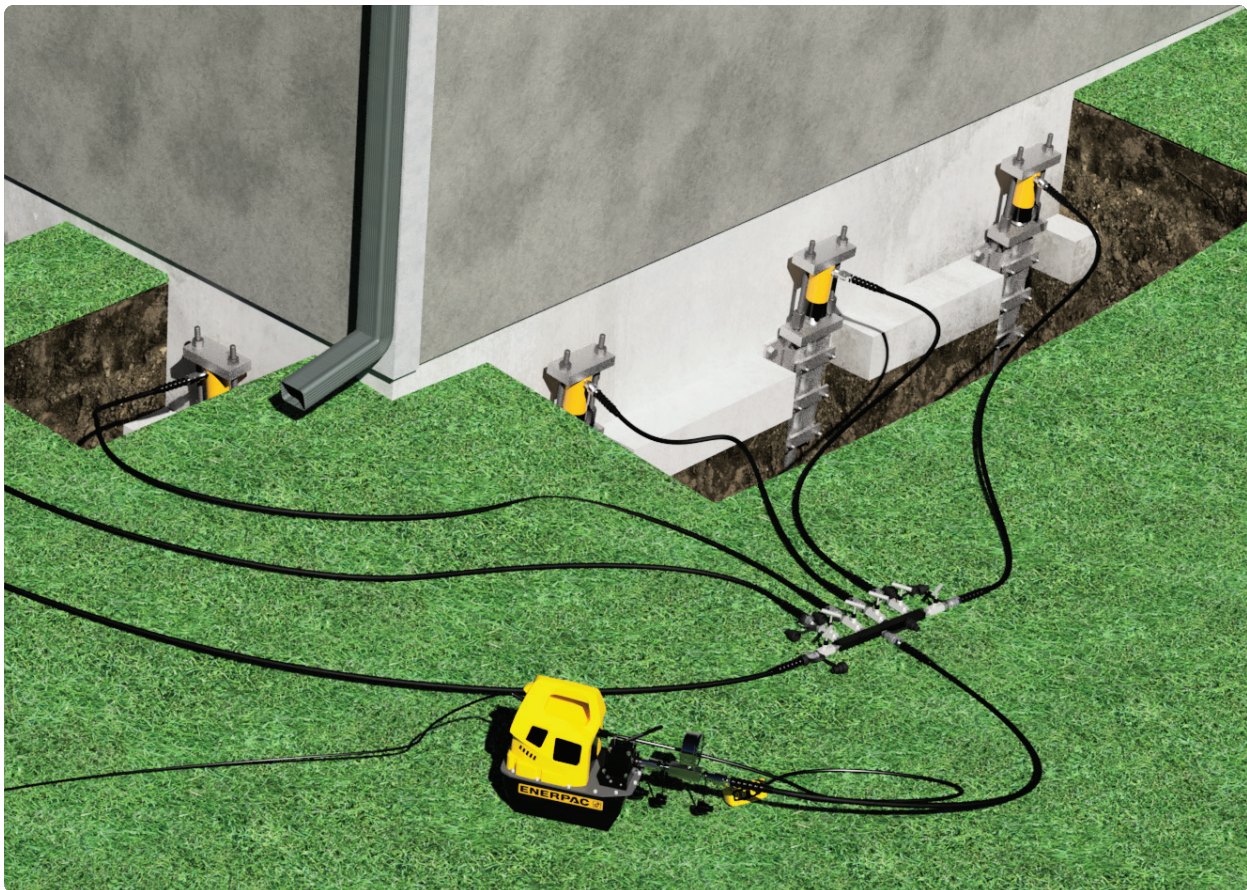
6 Pier Manifold Setup and Lift

6 Pier Manifold Hydraulic Setup

- Layout hoses to each completed pier/lift point.
- Connect hoses to each HYD-254 cylinder and into the 6-way manifold
- After all hoses are connected to the manifold, connect the 4" gauge to the lift pump
- Connect the last hose from the 4" gauge to the back of the manifold

6 Pier Manifold Lift

- Pressurize hoses between 500-1000 PSI
- Check all brackets and tighten heavy hex nuts above the pier cap
- Begin lifting at the lowest point
- After you have reached your desired lift, tighten all valves down on the manifold to hold pressure
- Tighten heavy hex nuts down on the bracket



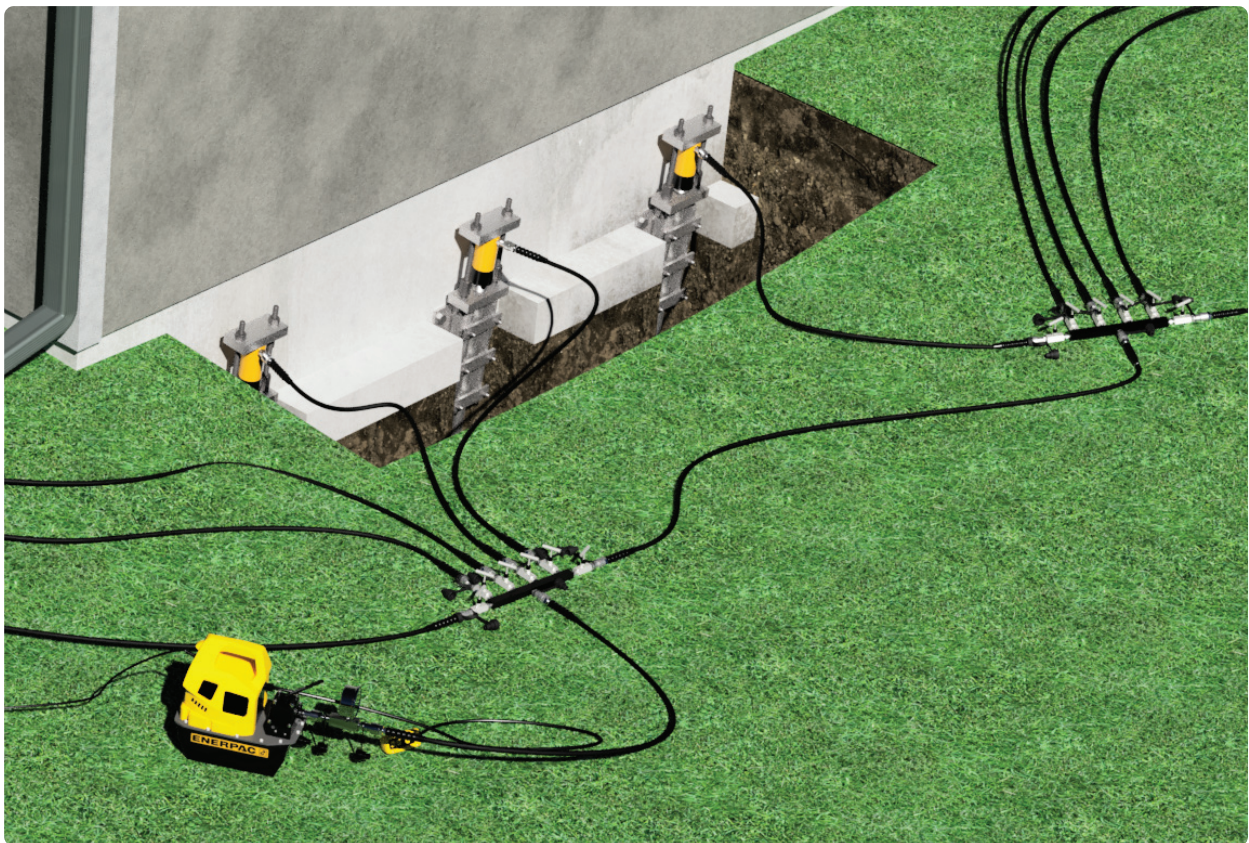
Multiple Manifold Lift Hydraulic Setup

Multiple Manifold Setup (More than 6 Piers)

- Layout hoses to the first 5 piers
- Connect hoses to each HYD-254 cylinder and into the 6-way manifold
- Connect an additional hose to last open port on the manifold to the back of a new manifold
- Take remaining hoses and insert to both HYD-254 cylinders and 2nd manifold
- Once all hoses are connected to manifolds, your setup is complete to begin lifting

Multiple Manifold Lift

- Pressurize hoses between 500-1000 PSI
- Check all brackets and tighten heavy hex nuts above the pier cap
- Begin lifting at the lowest point
- After you have reached your desired lift, tighten all valves down on the manifold to hold pressure
- Tighten heavy hex nuts down



Hydraulic Release

Releasing Hydraulic Oil from Cylinders & Verifying the Lift

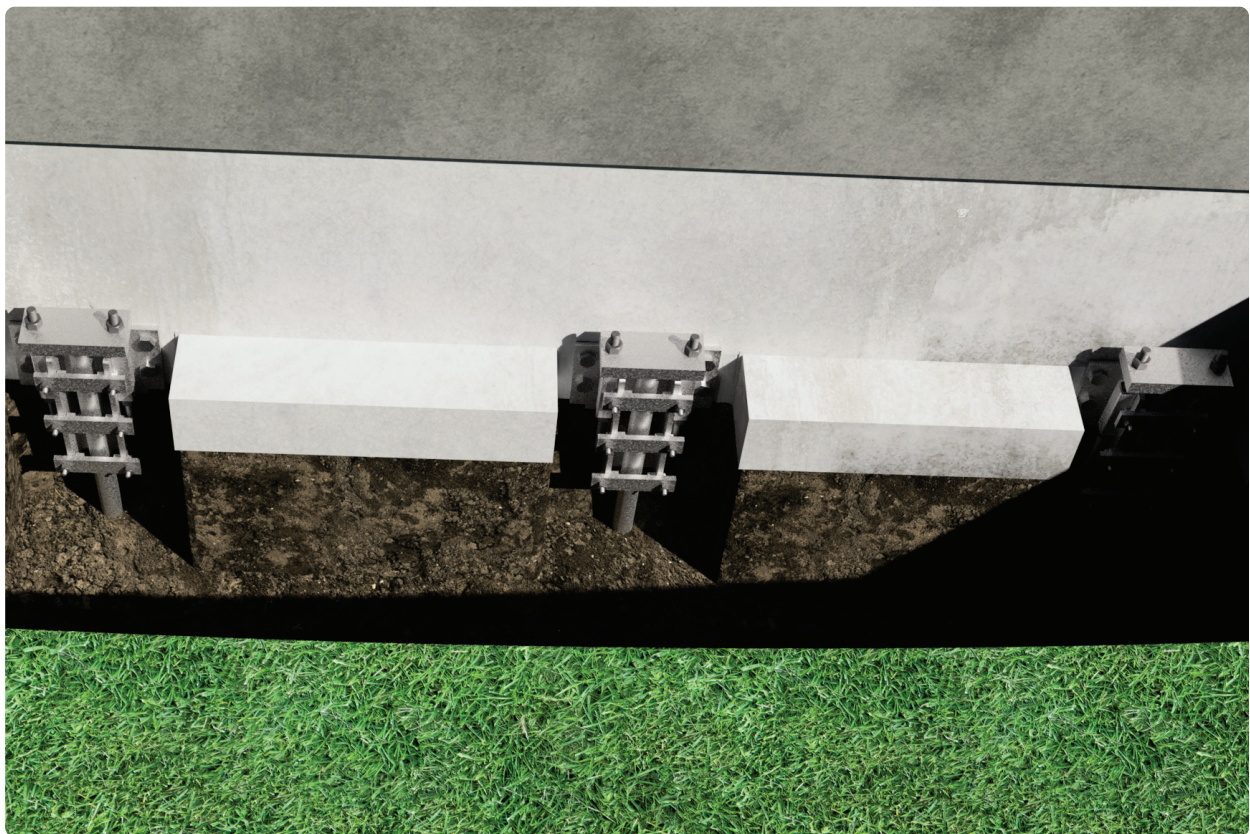
- Verify your lift points
- Open the valves on the manifold and release the pressure back to the electric pump
- Remove hydraulics and lift assemblies

Note: Make sure nuts are tight before releasing oil

Inspections and Sign-Off of Completed Work

Home Check and Finalization

- Check all doors and windows to make sure they are working correctly
- Complete crack repair and waterproofing
- Inspect drain tile for damage, replace as needed
- Backfill with clean rock then add 12" of topsoil for landscaping
- Clean up
- Take final elevation readings





Certified Installer



**15612 S. Keeler Terrace
Olathe, KS 66062
Phone: 913-298-6749
Fax: 913-393-0008
Toll Free: 866-467-2746
www.getecp.com**