

INSTALLATION GUIDE FOR STEEL PIERS



WITH ECCENTRIC LIFT BRACKET

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Survey Site

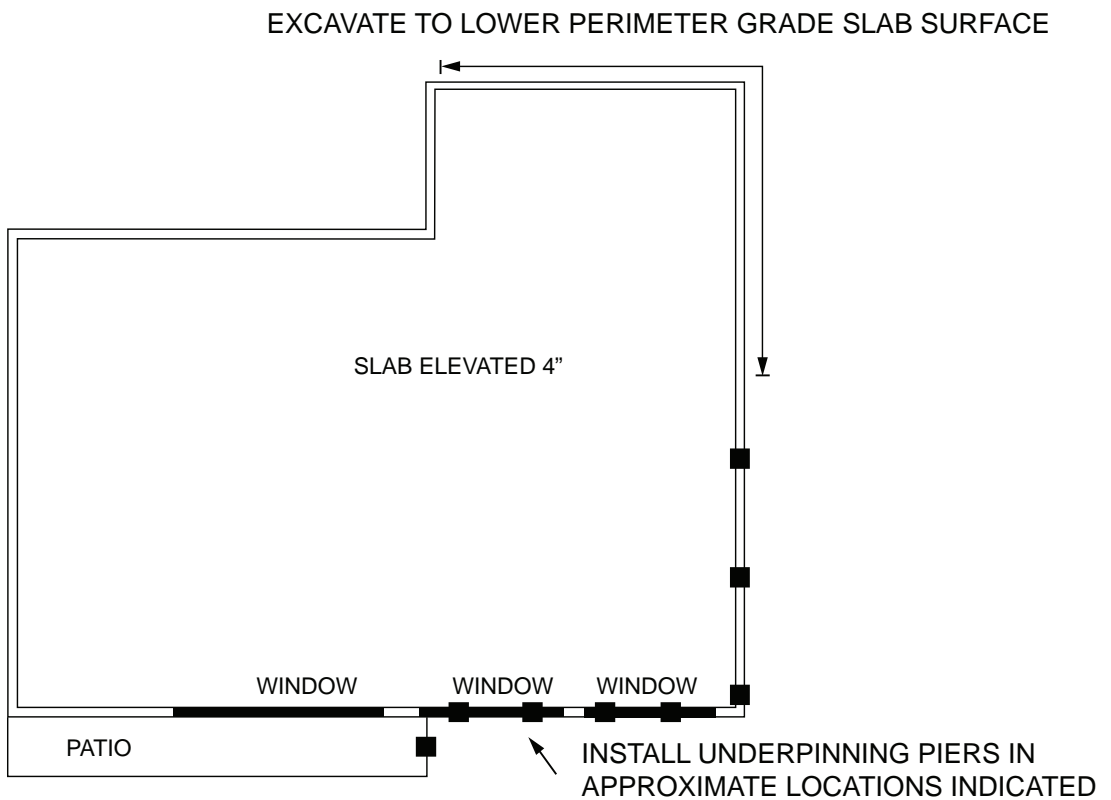
- ✓ Call 811, the national call-before-you-dig phone number, to request that the approximate location of buried utilities be marked with paint or flags so that you don't unintentionally dig into any underground utilities
- ✓ Evaluate and record Benchmarks for your job, (An established elevation i.e. 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



Pier Placement

Pier 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

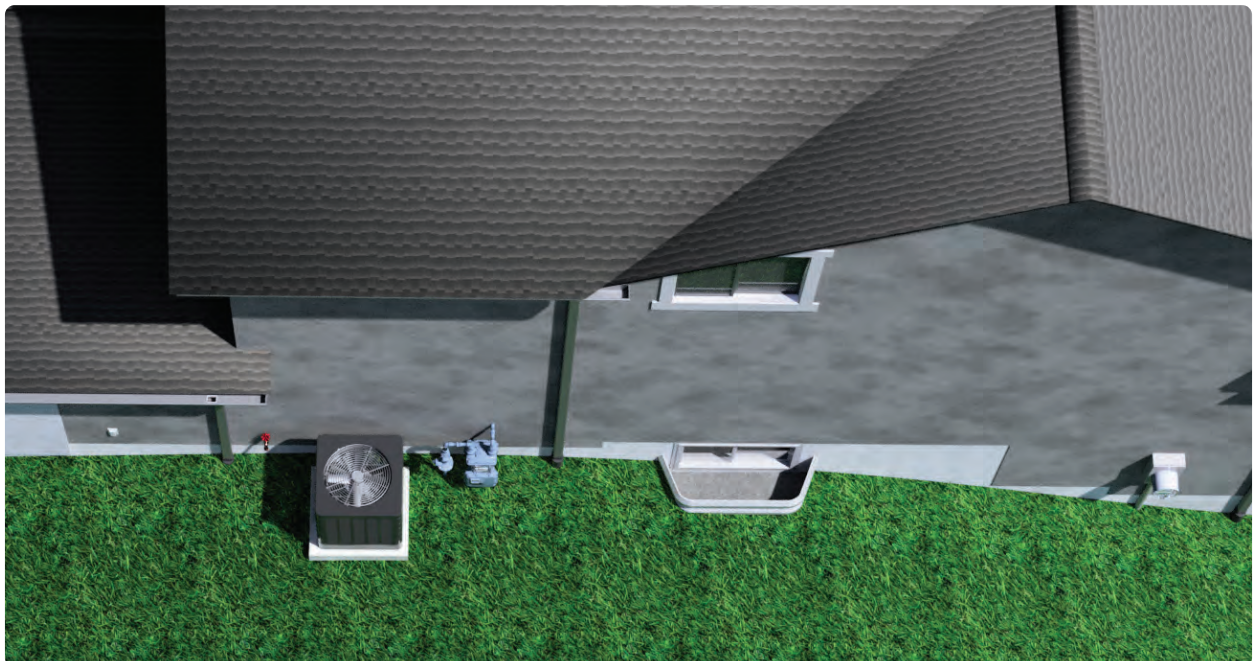


Engineer/Design Drawing

Pier Placement – Obstacles

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

- Use the crawlspace drive stand if that is available
- Move the pier on the inside upon customer's/engineer's approval
- If you have questions contact the ECP Engineering Dept.
- Place plywood against brick to avoid unnecessary damage to mortar
- Optional, PPB-250 Concentric Pier is available



Outside Excavation

Outside foundation excavation - strip excavation or individual pier location.

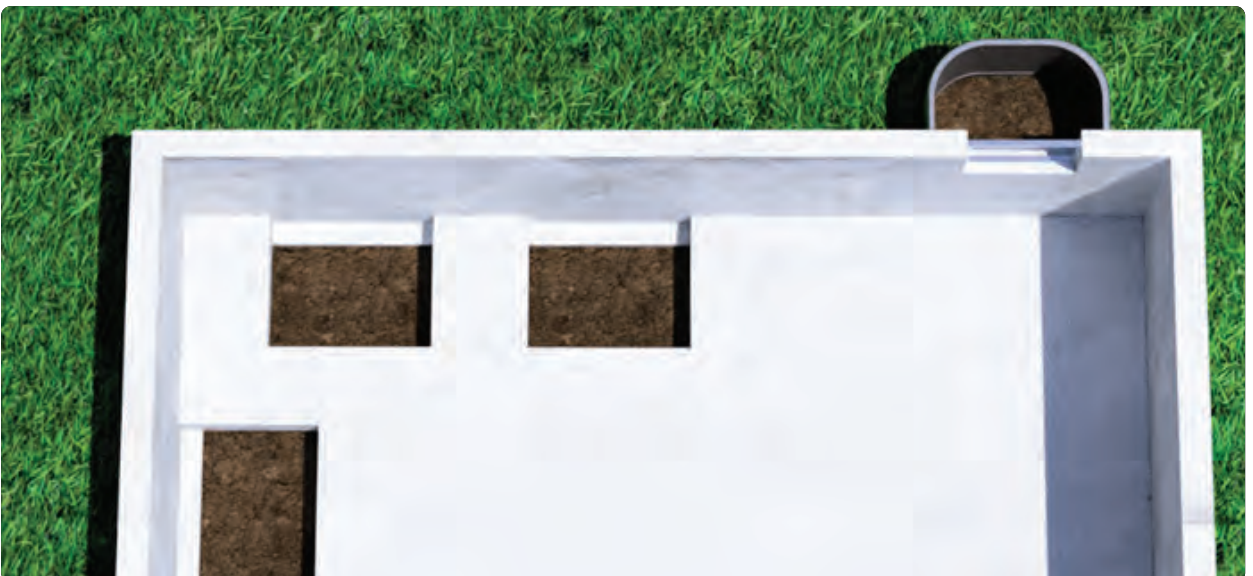
- Strip Excavation (Trenching) – dig a 3ft. wide trench along the entire length of wall until you reach the footing
- Individual Pier Excavation – dig 3' x 3' trench away from foundation wall until you reach footing



Inside Excavation

Inside foundation excavation

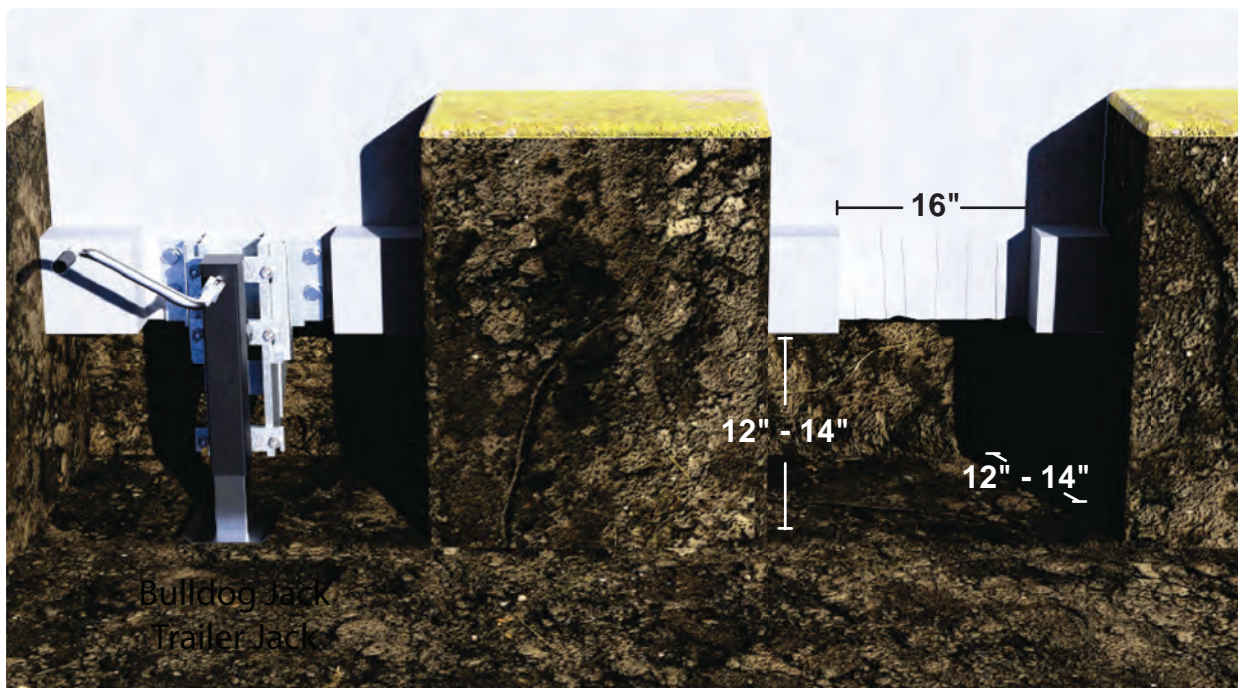
- Remove concrete floor in a 3' x 3' square away from the foundation wall
- Cut all re-bar or wire mesh in concrete floor
- Remove concrete debris inside of basement
- Dig soil for preparation in pier placement



Footing Preparation

Footing procedure

- Remove footing 16" wide back to the wall
- Remove soil 12" to 14" both vertically and horizontally below footing
- Do not dig underneath until footing has been removed
- If rebar becomes exposed, consult with a professional engineer



Mounting Brackets to Footings

Optional mounting procedure

Using a Bulldog Jack for pre-hanging brackets

- Remove the pier cap
- Using a Bulldog Jack mounted to a bracket faceplate
- Move bracket into position tight against the footing
- Use a torpedo level to make sure bracket is level
- Drill and install anchor bolts
- Don't tighten the bolts fully until the drive stand is in position
- Remove the Bulldog Jack and torpedo level

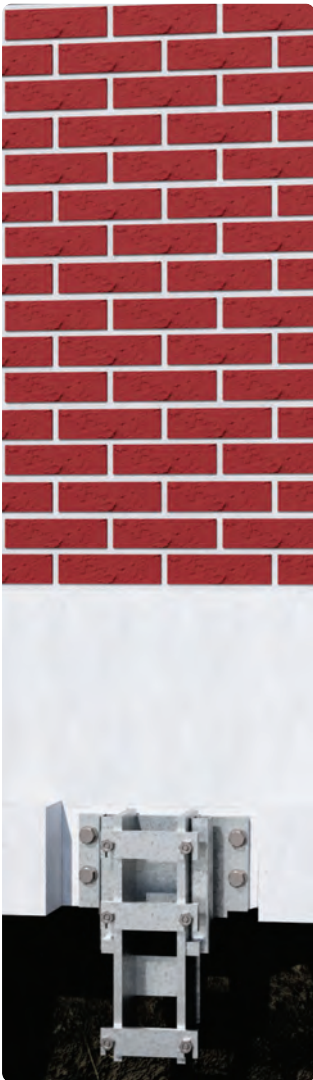
Attaching Drive Stand & Cylinder to Bracket

Attaching Drive Stand and Cylinder to Bracket

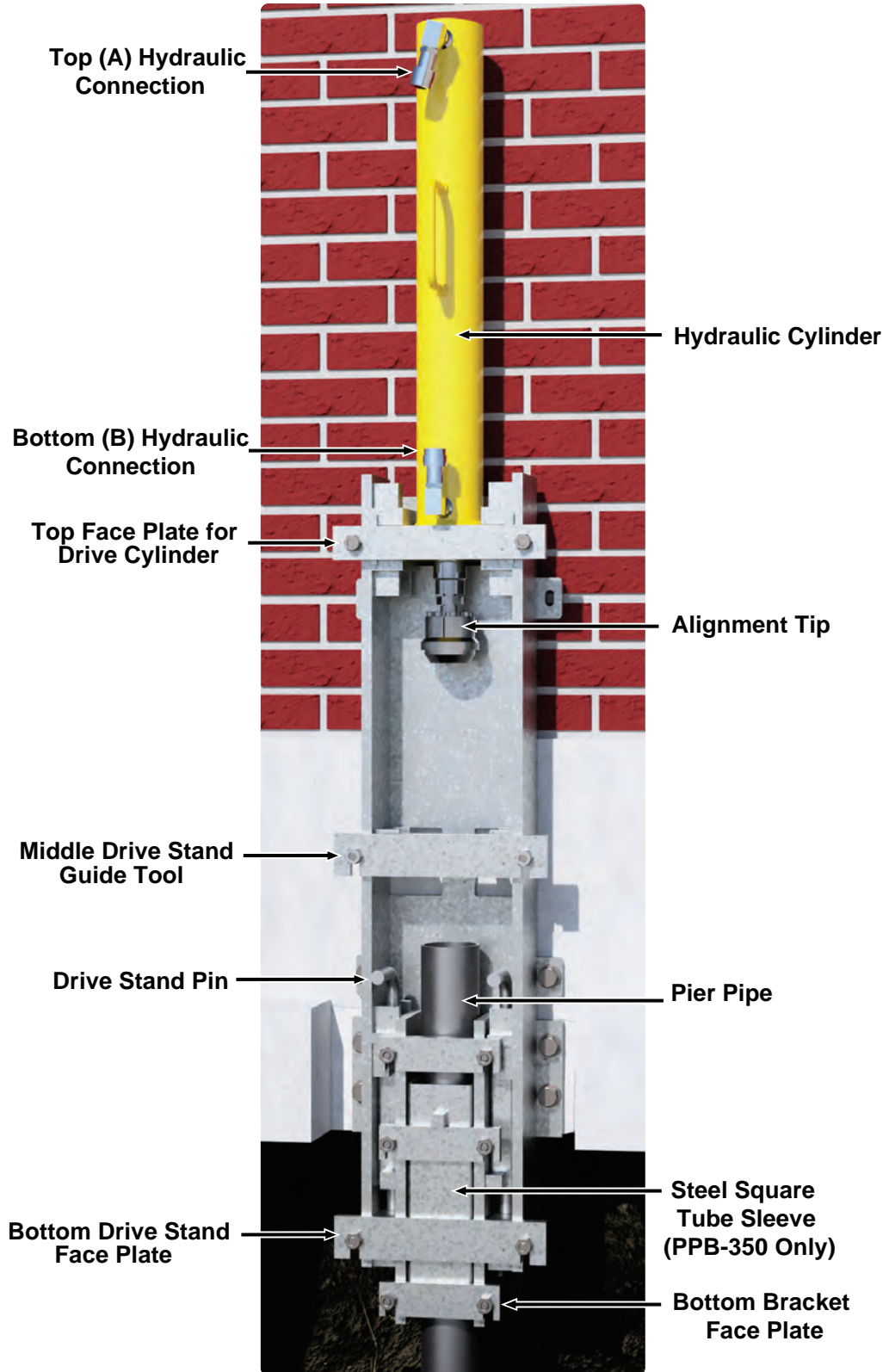
- Place and secure bracket at the prepared footing
- Attach drive stand to bracket with pins
- Insert starter pipe and bracket face plates
- Insert steel tube sleeve to the connected bracket (PPB-350 only)
- Connect bottom face plate and middle guide tool to the drive stand
- Insert drive cylinder to top of the drive stand sleeve

Mounting Bracket to Foundation Wall

- Advance starter until bracket is secured under footing
- Use a torpedo level to make sure bracket is level
- Put remote handle to neutral position
- Drill and install anchor bolts to anchor brackets
- Retract the cylinder



Drive Stand & Drive Cylinder



Remote Handles



VC 4L Handle

- A side is located to the “Right” of the handle
- B side is located to the “Left” of the handle

This indicates the “Tank” side of the remote valve

- Connected to B/ “Left” side of the pump handle



This indicates the “Press” side of the remote valve

- Connected to A or “Right” side of the pump handle



Advanced 4LC Handle

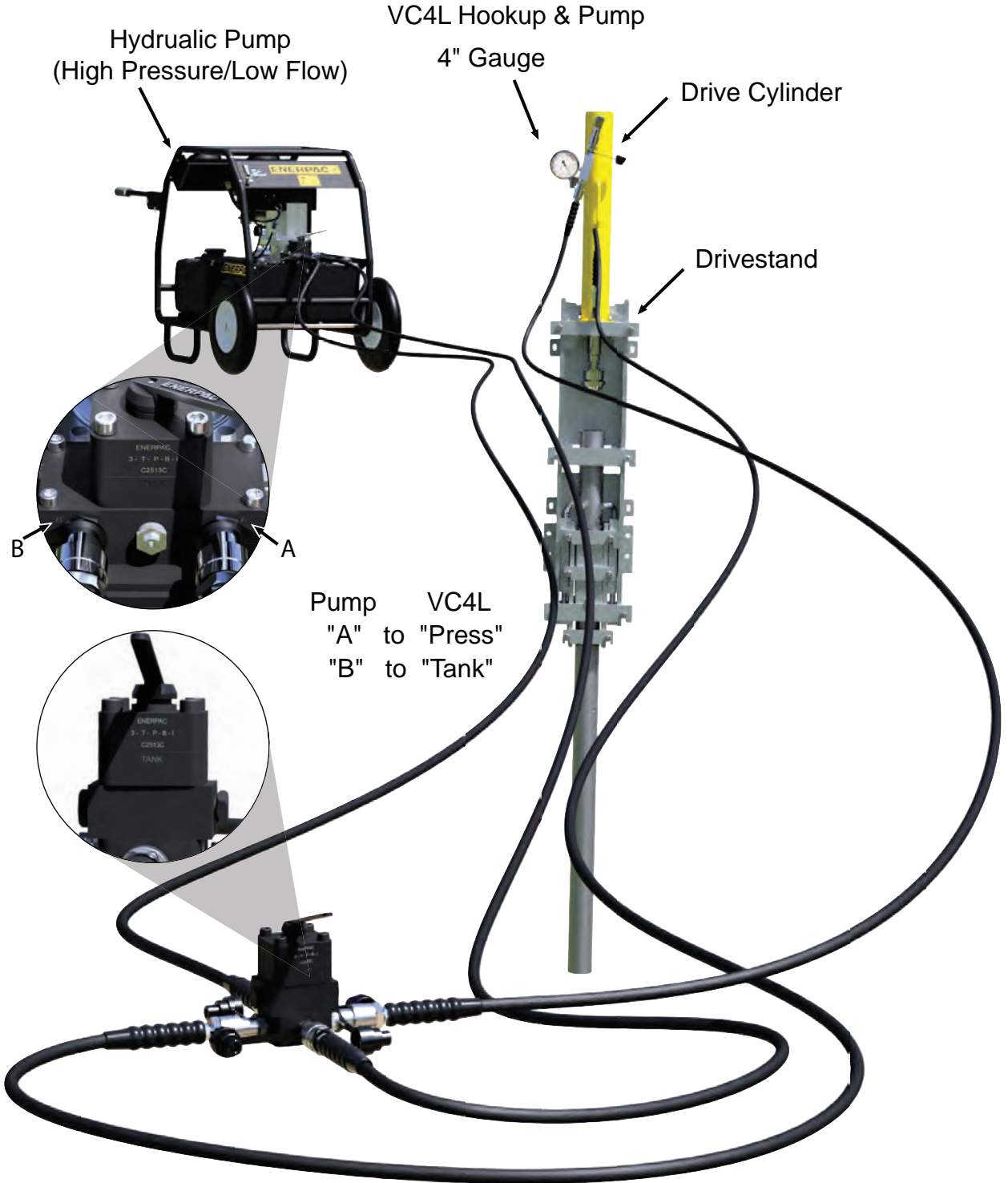
- Speed control to prevent damage or over lifting
- Helps with training new employees
- Pressure regulator
 - It allows the system to only achieve a set pressure
 - Helps with control with lighter structures



Connecting Hydraulics

Setting up hydraulics prior to mounting/installation

- Connect two hydraulic hoses from pump to handle
- Connect two hydraulic hoses from handle to cylinder
- * Remote handle must be in the neutral position before applying pressure to hoses



Pump VC4L
"A" to "Press"
"B" to "Tank"

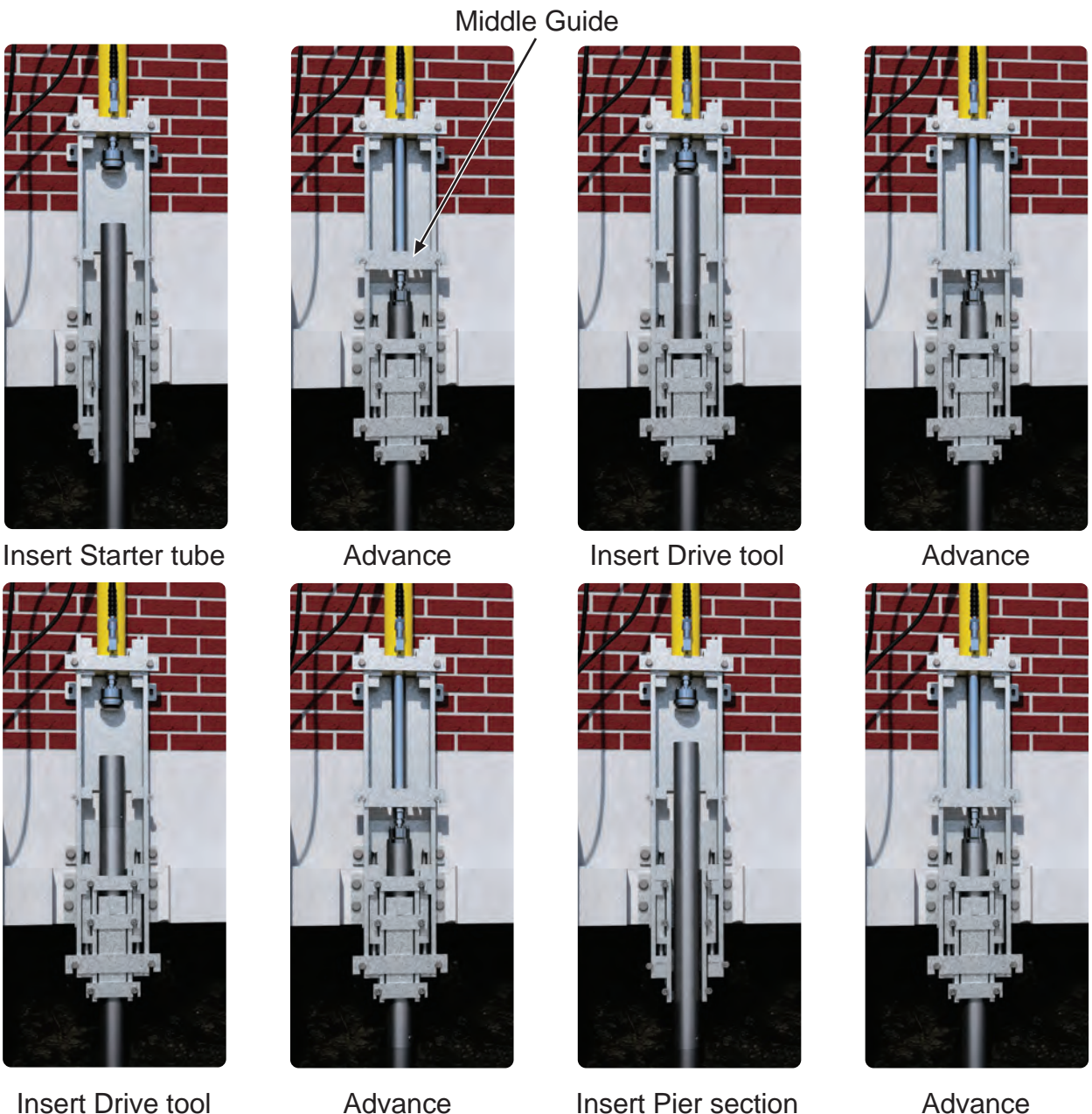
VC4L Remote Valve

Pier Pipe Installation

Pier Pipe Installation

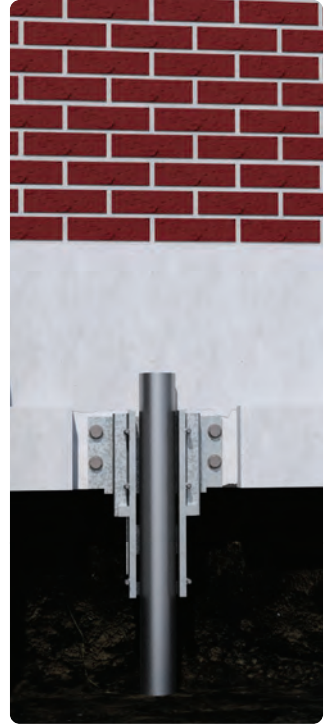
- Insert starter pipe and advance approximately 22" into surface
- Remove middle guide from drive stand and connect drive tool
- Advance cylinder just past the middle guide
- Connect short drive tool and advance the cylinder just past middle guide
- Remove all face plates and all square tubing to allow next pier section to be connected
- Insert new pier section and continue the driving process until specified pressure is reached

Note: Steel Square Tubing required when installing PPB-350



Drive Stand Removal

- Remove top face plate and drive cylinder
- Remove all face plates and drive stand pins
- Slide drive stand off the pier bracket (if pier pipe is above the bracket, pipe has to be removed in order to slide drive stand off)



Cutting Pier Pipe Ending Above Bracket

- Measure 4" above top of bracket
- Remove pipe and cut with a cold or dry saw
- Insert pier pipe after cut

Measure 4"
from Top of
Bracket



Mark Line to
Make Cut

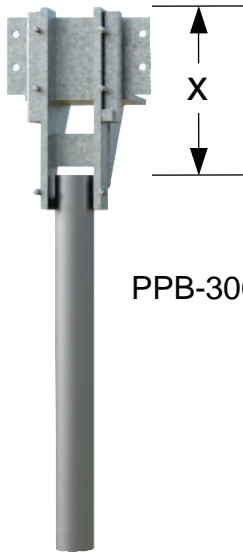
PPB-300/350



(DW-872)

Cutting Pier Pipe Ending Below Bracket

- Measure from the top of pier pipe to the top of the bracket, then add 4"
- Cut and re-insert pier pipe



$x + 4" = \text{Total Pier Pipe}$

PPB-300/350

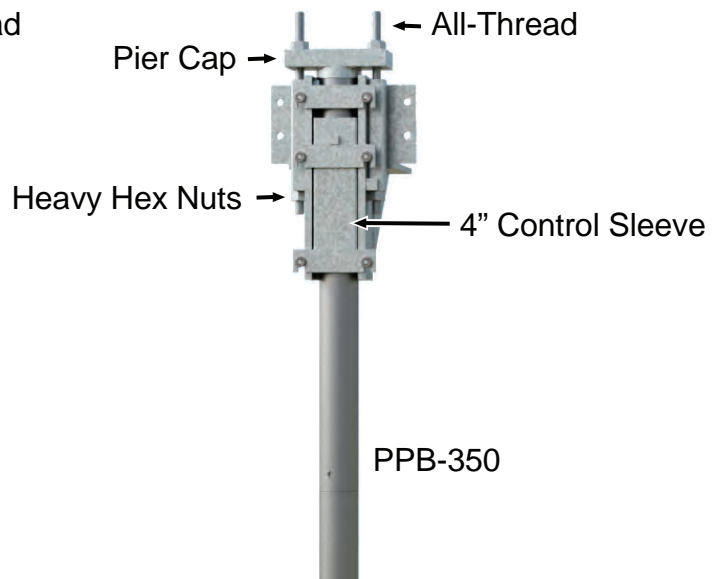
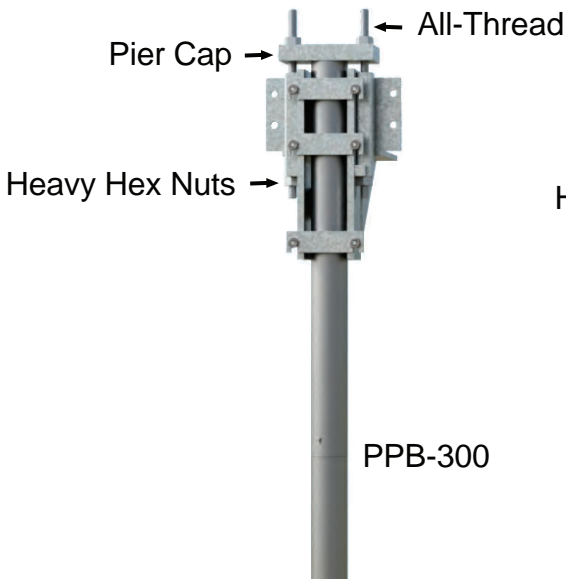


(Makita LC1230)

Pier Bracket Cap Installation

PPB-300/350

- Place cap on top of the pier pipe.
- Insert the B7 All-Thread through top cap and the square tube on the side of bracket
- Place heavy hex nuts on both ends of the All-Threads
 - Leave 2 to 3 threads on the bottom showing
 - Leave 1" or more thread on the top nut showing.

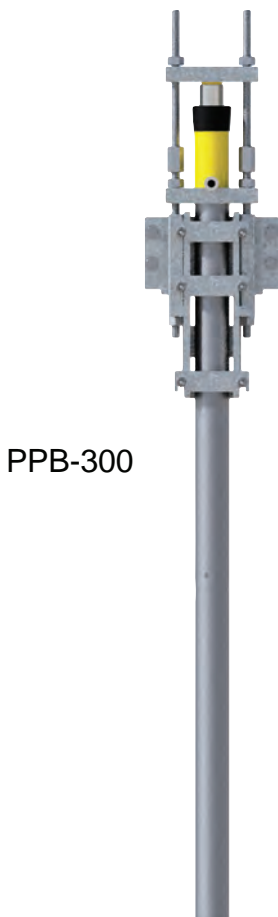
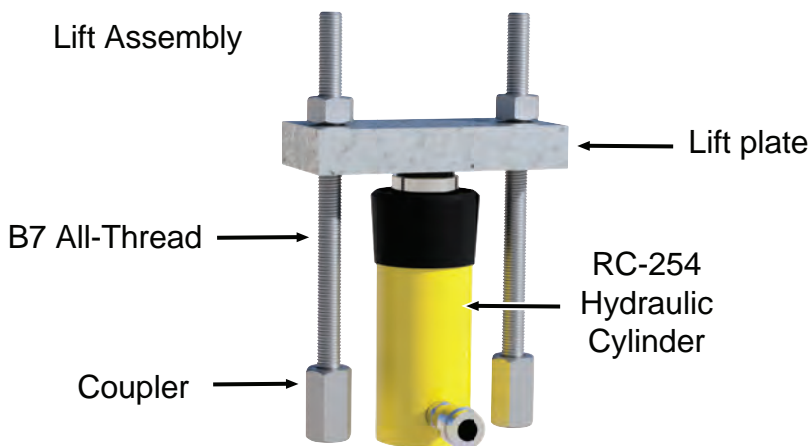


Lift Assembly

All lift assemblies are designed to use Enerpac HYD-254 25-Ton Cylinder.

PPB-300/350

- 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”

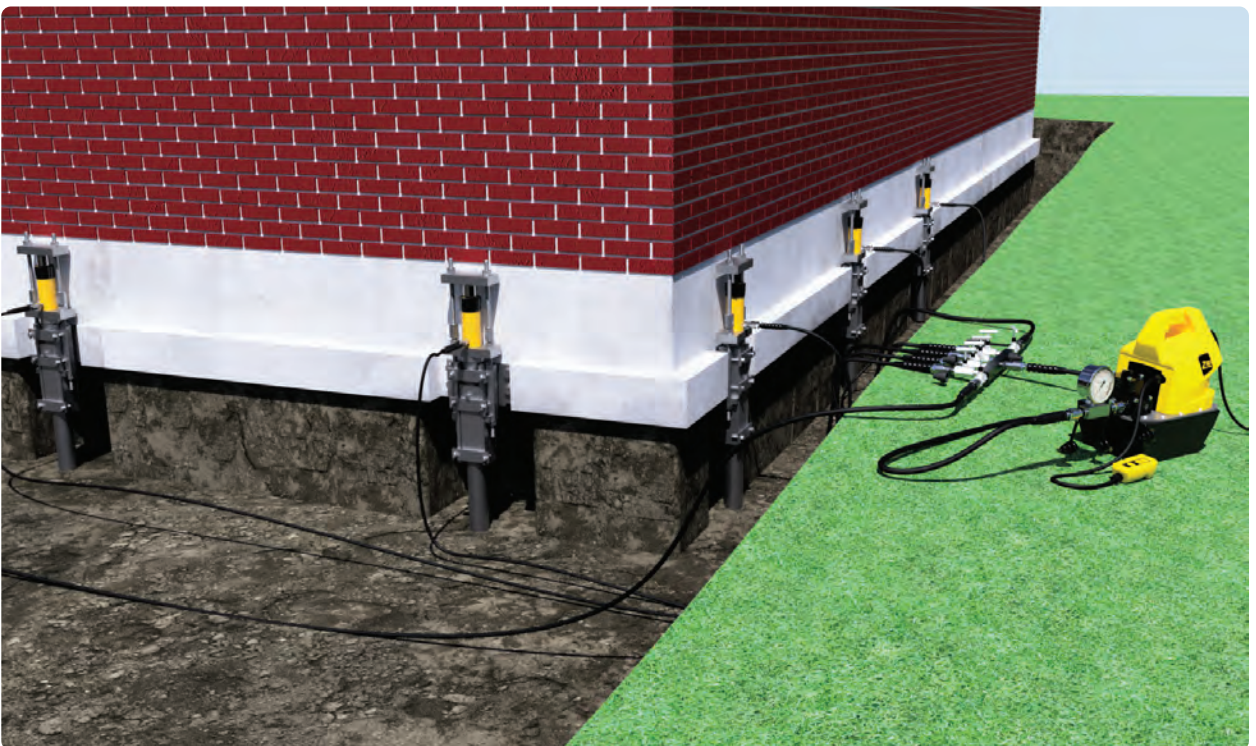
6-Pier Manifold Setup and Lift

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



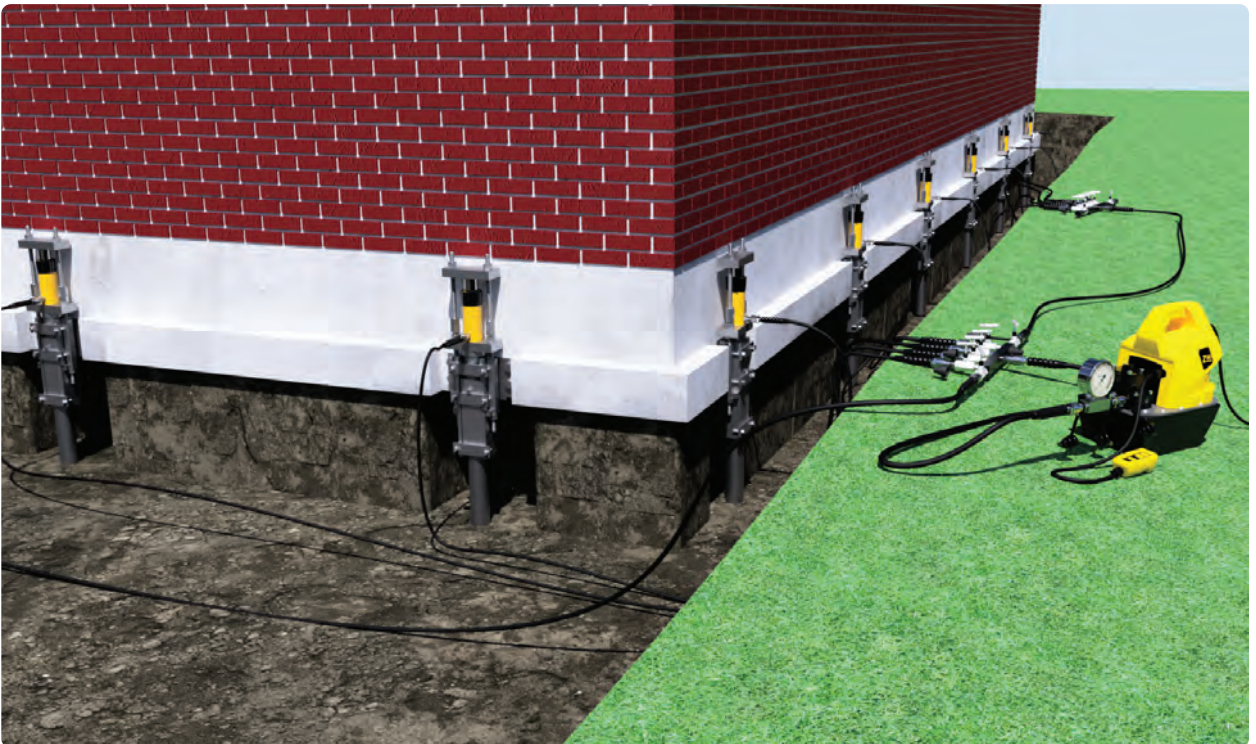
Multiple Manifold Setup and Lift

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

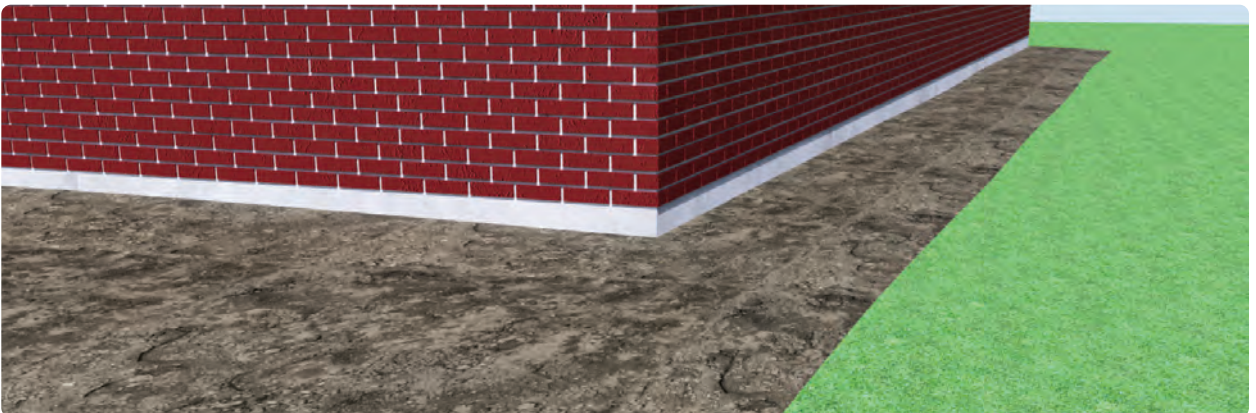
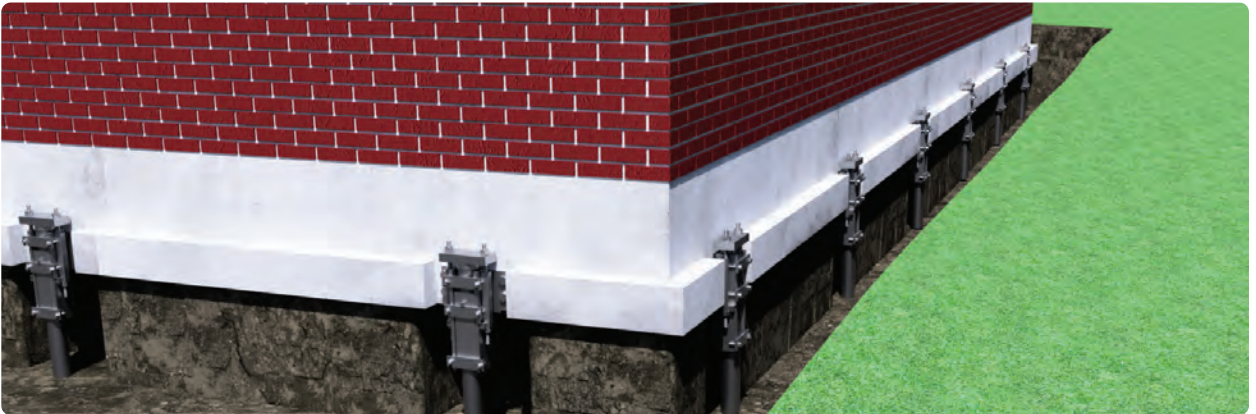
- Verify your lift points
- Open the valves on the manifold and release the pressure back to the electric pump
- Remove hydraulics and lift assemblies

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



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