



Lil Guppy Playground Pump

OWNER'S MANUAL

Serial No. _____

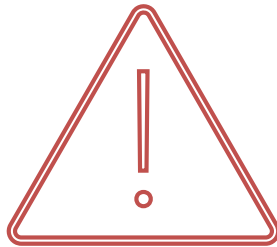
Rev -

Proudly Manufactured in Conway, Arkansas, UNITED STATES OF AMERICA.



ATTENTION:

Do **NOT** pump when dry!



- Read the instructions completely before beginning the installation process.
- After periods of no use, drain the pump of water and apply a light spray of **Extra Virgin Olive Oil** to the inside of the body and the piston seal. This is used for lubricating the pump internally.
- DO NOT use petroleum products to lubricate the pump.



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Owner's Manual

Product Specifications

Description: The Lil Guppy Playground Pump is a suction pump for static water levels less than 25 vertical feet and up to 300 horizontal feet from the water source.

Features

- Over 14 ounces per stroke
- About nine (9) strokes for one gallon of water
- Hand polished stainless steel finish
- Self-priming and no routine maintenance
- Handle Loop (Standard), Handle Knob (Optional)

Composition

- Shallow well hand pump body, handle, and lift rod are stainless steel
- Fasteners are stainless steel
- Cup Seals / O-rings are food-grade Buna rubber
- All other components are NSF approved Acetal or lead-free brass

Physical Characteristics

- Overall height: 22"
- Weight: 25 pounds
- Inlet connection: 2"-11 NPT
- Spout connection: Quick Connect, Straight Spout Adapter
- Bottom Flange: 6.3" diameter with holes for 3/8" anchor bolts

Installation

Warning – You must comply with your local plumbing code. Contact a certified plumber if you have questions about proper plumbing codes in your area.

Before you begin the installation of your new pump, open the box and inspect the contents. Verify that you have received everything that you ordered. If there is anything that is missing or does not match, please contact us immediately to correct the situation at Sales@CadronCreekPlay.com.

Record your Lil Guppy Pump Serial Number on the front page of this manual.

Location – Before deciding on the location of your pump, you should consider the physical limitations of this style of pump. The pump should be installed in a location that meets the vertical and horizontal pumping limitations of the Lil Guppy shallow well pump.

Read the instructions completely before beginning the process.

Step #1: Verify there is proper space for the hand pump and pipe

See **Detail A-1 or A-2: Installation Measurement Detail** to reference Lil Guppy Playground Pump measurements for a standard installation. Review your top space above and below where the pump is to be installed. Verify that there is proper clearance for the bottom flange (**Detail B – Item A**) on the surface top side and no obstructions for the anchor bolts (**Detail B – Item B**) and water pipe (**Detail B – Item C**) underneath.

Step #2: Determine installation items needed

Tools: Drill, 3 ½” hole saw, 3/8”- 7/16” drill bit, 9/16” socket and ratchet (or wrench), and security bolt bit (provided).

Anchor bolts – Determine the thickness of the top surface plus ¼” for the thickness of the bottom flange (**Detail B – Item A**). Add at least another ½” for the nut and washer to that total. This measurement determines the minimum length of anchor bolt that you require.

Lag bolts – If you are installing the pump onto a hard surface such as concrete you may consider using Lag Bolts. You will need to predrill holes (3/8”- 7/16”) into the surface per normal construction procedures. Follow the procedure below for marking before drilling.

Reducing Bushing – The Lil Guppy comes standard with a 2”-11 NPT female connection. Determine the diameter of the incoming pipe providing the water source to the pump. If your incoming water pipe is less than 2”-11 NPT, then a Reducing Bushing will need to be installed in the hand pump prior to installation. See **Detail F: Part Listing** at the end of this manual for ordering information.

Step #3: Identify proper location, mark and drill holes

Determine the exact location you would like to place the Lil Guppy Playground Pump on the planned surface. Refer to **Detail C** for a standard installation.

Once you have determined the exact location of the hand pump, mark a line along the entire perimeter of the bottom flange. From the front edge of the bottom flange, measure 3 1/8" and mark the hole location (**Detail C**). Drill a clearance hole at least 3 1/2" in diameter (**Detail C**) through the surface top to allow clearance for the incoming water pipe and reducing bushing.

If required, install the reducing bushing into the 2"-11 NPT on the bottom of the pump. Be sure to apply Thread Sealant Tape or other sealing material to the threads prior to installation. Next, align the pump along the perimeter of the bottom flange drawn earlier. Once the pump is in the proper position, trace the anchor bolt holes and mark the center of each hole. Remove the pump from the planned installation surface. Drill holes through the top of the surface for each anchor bolt or lag bolt.

Step #4: Attach hand pump to the planned installation surface

Anchor Bolts - Align the pump over the Anchor Bolt holes and install the four (4) bolts through the top of the surface. Attach the washers and nuts by partially tightening the first nut. Then move to the nut diagonally opposite. Repeat by moving to the other two in the same manner. Once all four are partially tightened, completely tighten all four following the same pattern.

Lag Bolts - Align the pump over the Lag Bolt holes and install the four (4) bolts through the top of the surface. Thread each bolt leaving it loose. When all four have been threaded begin to tighten. Next move to the bolt diagonally opposite. Repeat by moving to the other two in the same manner. Once all four are partially tightened, completely tighten all four following the same pattern.

Step #5: Connect the water source to the pump

The Lil Guppy Playground Pump can accept 2"-11 NPT pipe. If your incoming water pipe is less than 2"-11 NPT, then you will need a reducing bushing to downsize the pipe from 2"-11 NPT to the size of your water supply pipe. We recommend using at least 1" NPT pipe. **Be sure you know what size your water pipe is before purchasing this component.**

Note 1: To drain the pump and water pipe there must be a free flow of water back to the source. Therefore, it is important to NOT install a check valve or foot valve in the water pipe at any point between the pump and the water source.

Note 2: If your water source is not purified, such as a pond or stream, then you should install a "wye" screen filter in the pipe.

Step #6: Pump water

The installation is complete. Begin pumping the Lil Guppy Playground Pump until water begins to flow. It is not necessary to prime the pump.

Operation of the Lil Guppy Playground Pump

Overview: The Lil Guppy Playground Pump is an actual shallow well pump that draws water from a source by creating a vacuum inside the pump body. The vacuum is created by moving the handle up which pushes the piston assembly down. This action moves water upward through the check valve and above the piston. When the handle is brought down it raises the piston. This process creates a vacuum under the piston which “draws” water from the source. At the same time, the water that was above the piston is lifted to the spout where it flows out.

Normal Operation: The Lift Rod Assembly (Detail E & F – Item 2) moves through the Gland Nut (Detail E & F – Item 16) during operation. When the Gland Nut is new it should be loosely installed. The gland nut will be delivered already set at the ideal setting for functionality and ease of pumping operation.

If leaking exists, then the gland nut may need to be tightened. To tighten the gland nut, the top plate (Detail E & F – Item 20) will need to be removed. Use the provided security bolt bit to loosen and remove the four (4) security bolts (Detail E & F – Item 1) in the top plate. Use the provided security nut socket and a 3/16” allen wrench to disconnect the lower link shoulder bolt, washers, and security nut. Lift up on the top plate and handle to separate it from the pump body. Tighten the gland nut in ¼ turn increments until the leaking stops. After tightening the gland nut, place the top plate back onto the pump body and tighten all four (4) security bolts in a diagonal pattern. Reconnect and tighten the shoulder bolt, washers, and security nut onto the lower link.

As the Gland Nut and Cup Seal (Detail E & F – Item 17) wear, water could start to leak from the Gland Nut. If this happens tighten the Gland Nut by hand in ¼ turn increments until the leaking stops. If the Gland Nut is over tightened it could cause the pumping action to be more difficult.

If the Gland Nut squeaks apply a small amount of Extra Virgin Olive Oil. This is used for lubricating the pump internally. **Do not use petroleum products to lubricate the pump.**

With the Gland Nut properly set begin pumping until water begins to flow. The pump will retain its prime (water does not flow back to the source because it is stopped by the foot valve in the bottom of the pump inside the 2” water inlet)

If over time the pumping action becomes more difficult, apply Extra Virgin Olive Oil to the piston cup seal and inside the pump body. **Do not use petroleum products to lubricate the pump.**

Quick Connect Spout ‘n Shout: After installing the Spout ‘n Shout attachment to the Quick Connect spout connection there will be back pressure on the pump system due to restrictions to the water flow coming from the pump’s spout. The Spout ‘n Shout uses the pressure created to spray water through angled holes in the attachment creating a spray feature.

This back pressure may result in water leaking out of the Gland Nut around the Lift Rod. Tighten the Gland Nut in ¼ turn increments until the leaking stops with the Spout ‘n Shout attachment installed.

When the water has ceased leaking around the Lift Rod the Lil Guppy Playground Pump is ready to pump. Be aware that more effort will be required to pump water through the Spout ‘n Shout spray attachment due to the pressure created by the attachment.

How to Winterize the Lil Guppy Playground Pump

To winterize the pump, you need to drain it of water to prevent freezing which can cause damage to the pump. The Lil Guppy Playground Pump will freeze if exposed to temperatures below 32 degrees F.

Step #1: Drain water from pump body

Disconnect the water source to the pump. Begin pumping until water no longer exits the spout. Remove the pump from its mounting surface. Place in a location that will not freeze. Note: Now would be a good time to attach the Quick Connect Sealing Plug Kit (if purchased).

De-winterizing

Be sure that the weather has warmed sufficiently before continuing with this process, assuming the pump is not in a heated environment.

Step #1: Reinstall pump to original location

Retrieve pump from storage. Verify that the pump is clean and in good repair. Follow installation instructions for locating the pump onto the mounting surface. Be sure to remove the Quick Connect Sealing Plug Kit (if used during winterization).

Step #2: Open water access

If the water source valve was closed during the draining operation, turn the valve on to allow the pump to have access to water.

Step #3: Pump water

With the water connected and turned on begin pumping the handle. Continue until water begins to flow from the spout.

Maintenance for the Lil Guppy Playground Pump

Replacement components are shown in **Detail E – Exploded View** and listed in **Detail F – Parts Listing**.

The Lil Guppy Playground Pump has components that will wear with usage. Required maintenance other than planned at the end of a season will be required if there is excessive wear causing water to leak from the Gland Nut. A reduction in water output would also indicate the need for maintenance.

Cup Seals and O-ring – The life of these seals is directly related to usage. If the installation site is high usage, then it would be a good idea to replace all of the seals each winter. The wear on these parts is directly related to the amount of usage of the pump and the condition of the water being pumped. Water that has contaminants that could act as an abrasive will cause excessive wear on the Packing Gland, Piston Cup Seal and O-rings.

We offer a **Lil Guppy Playground Pump Seal Maintenance Kit** which consists of replacements for sealing components in the pump and a Seal Pick Tool. See the table below for contents of the Seal Maintenance Kit. Instructions are included with the Seal Maintenance Kit.

Lil Guppy Playground Pump Seal Maintenance Kit Includes:

Part Number	Description	Quantity
04-000-1-40-20	External Star Lock Washer	1
04-000-1-50-21	Piston Low-profile Ny-Loc Nut	1
04-000-1-55-01	Security Bolt - Top Plate	1
04-000-1-55-02	Security Nut	3
04-000-5-75-01	Check Valve	2
04-001-3-71-03	Packing Gland Cup Seal	1
04-002-3-71-07	Piston Cup Seal	1
04-022-1-68-01	Internal Snap Ring	2
04-139-3-70-02	Top Plate O-Ring	1
55-001-0-07-00	Seal Pick Tool	1
60-002-0-03-11	Link Washer	16
66-002-0-08-03	Packing Gland Backing Washer	1
66-002-0-08-05	Bottom Bushing	1

Note: We recommend thoroughly cleaning the inside components of the pump during this maintenance process. It is best to remove components that will be replaced first, then clean the inside of the pump and then install the new components.

Hardware Maintenance – With proper care, it is unlikely that you will need to replace the hardware used to assemble your Lil Guppy Shallow Well Hand Pump. We offer the hardware that can be purchased by contacting us at Sales@CadronCreekPlay.com.

Accessories

Quick Connect Accessories

Part Number	Description	Quantity
65-001-0-14-01	Quick Connect Spout 'N Shout Kit	1
65-001-2-14-01	Quick Connect 90 Degree Elbow	1
65-001-3-14-01	Quick Connect Hose Bibb Kit	1
65-001-4-14-01	Quick Connect Sealing Plug Kit	1
65-001-0-14-02	Quick Connect Wrench	1

*The Lil Guppy ships with a Straight Spout Adapter Kit (Item 23) attached to the end of the spout. This can be removed using the quick connect wrench to allow for the addition of quick connect accessories. *

- Spout 'N Shout is a spray nozzle that sprays water in an arc as the children pump
- 90 Degree Elbow allows the water to flow horizontally when initially flowing from the spout for situations where the water needs to start going forward instead of down
- Hose Bibb allows you to connect a standard water hose to the spout
- Sealing Plug acts as a cap to close off access to the spout
- Wrench is required to install/remove the Quick Connect accessories

General Accessories

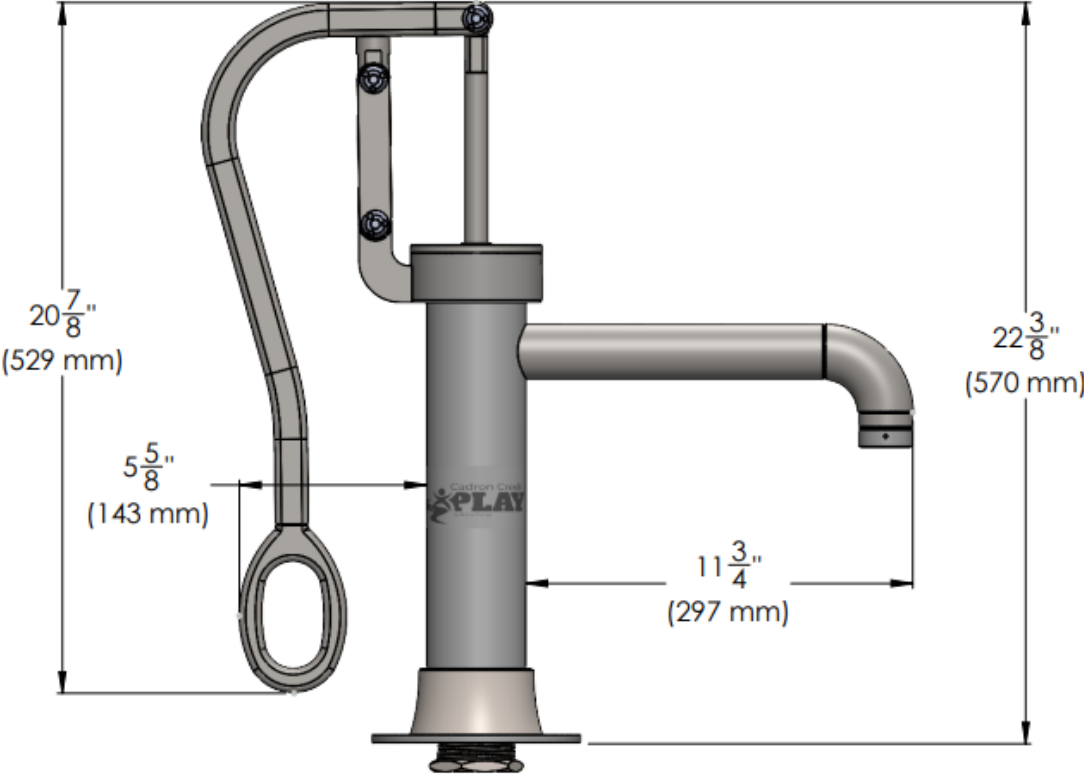
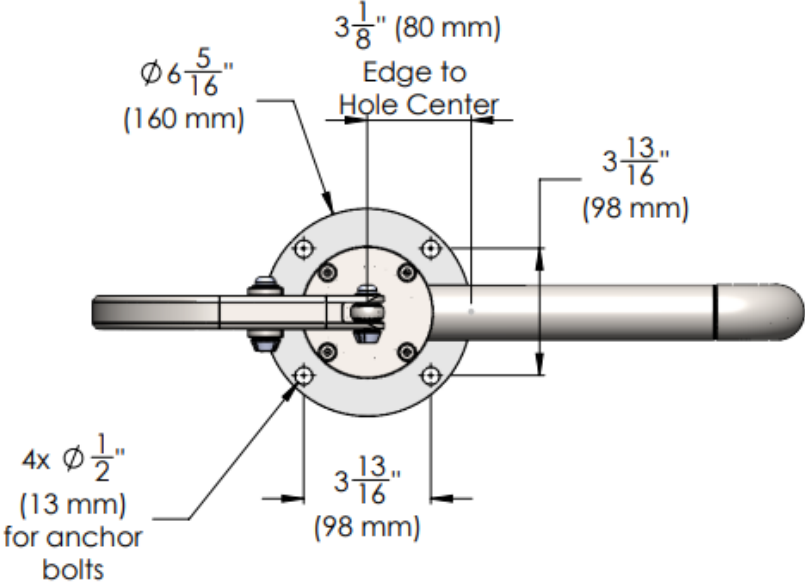
Part Number	Description	Quantity
04-029-0-74-01	Reducing Bushing 2" x 1 ¼"	1
04-029-0-74-02	Reducing Bushing 2" x 1"	1

Contact

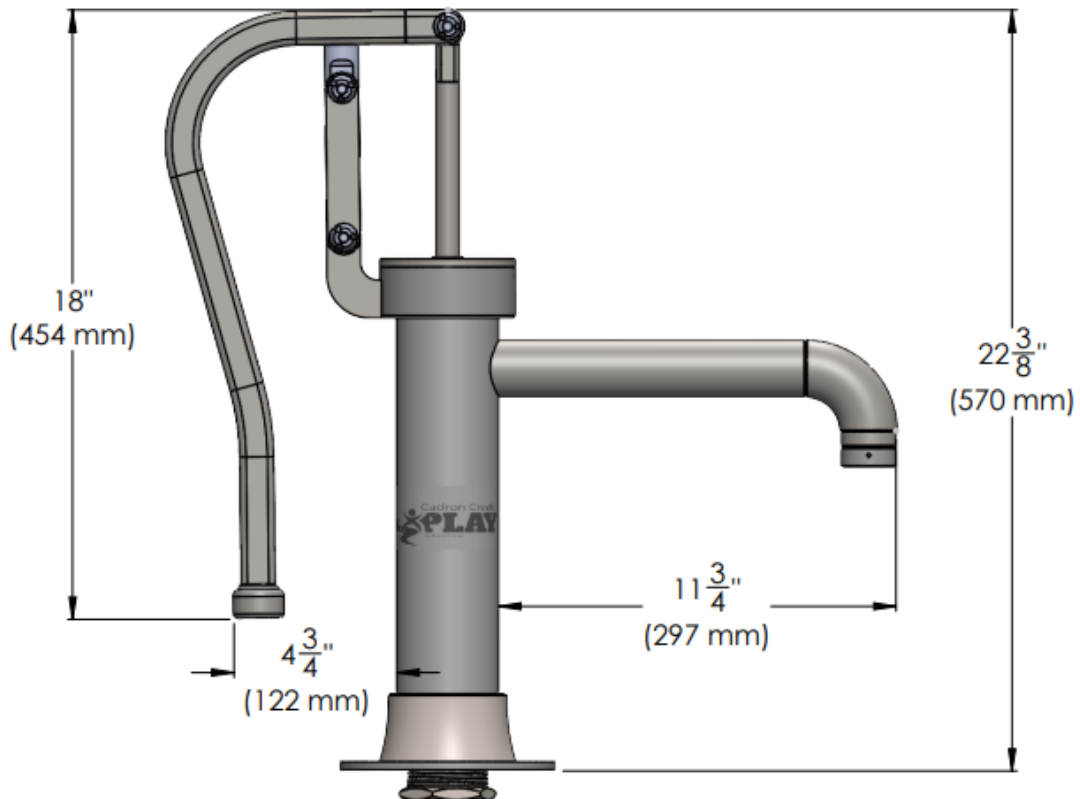
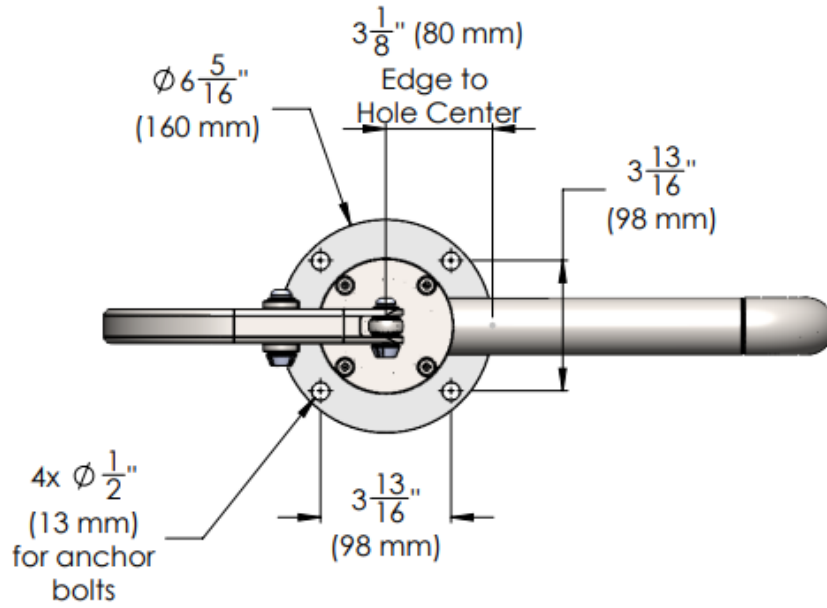
For questions about your product, you can email technical support at Sales@CadronCreekPlay.com.

Appendix

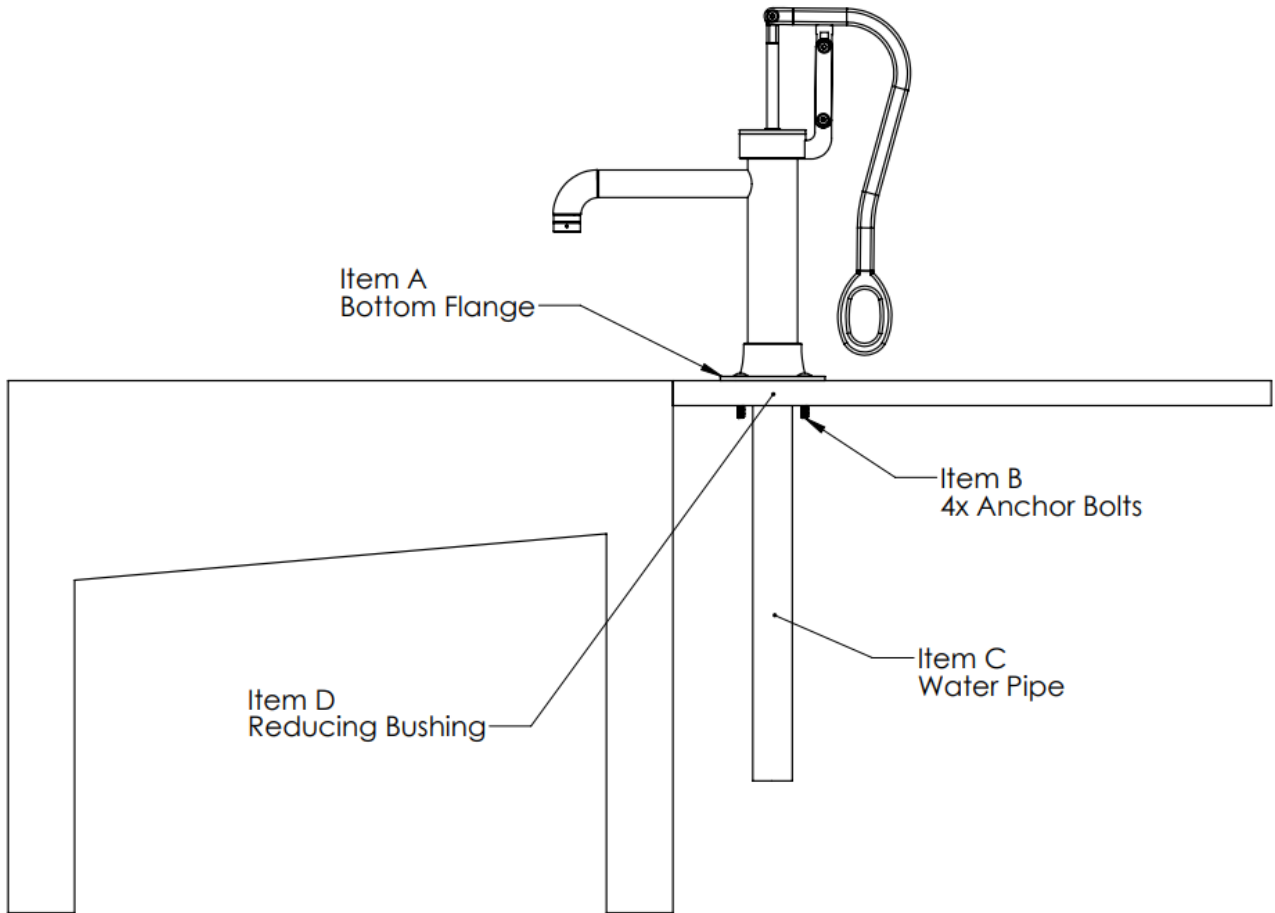
Detail A-1: Installation Measurement Detail (Handle Loop)



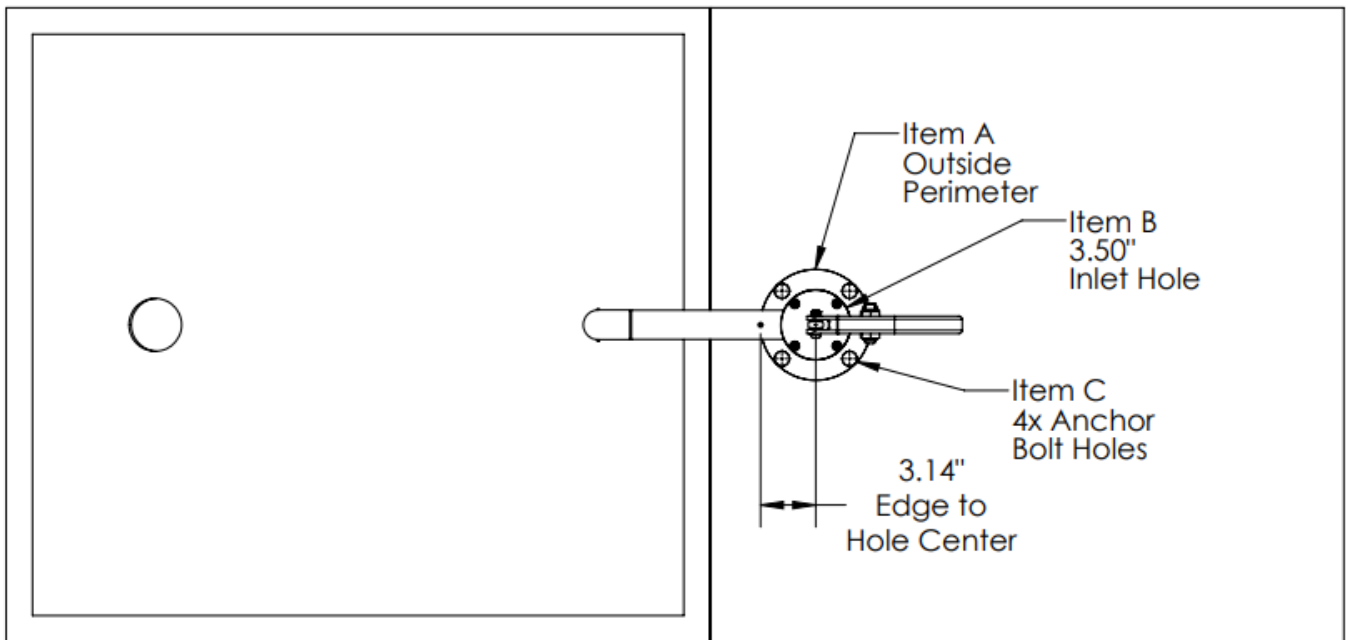
Detail A-2: Installation Measurement Detail (Handle Knob)



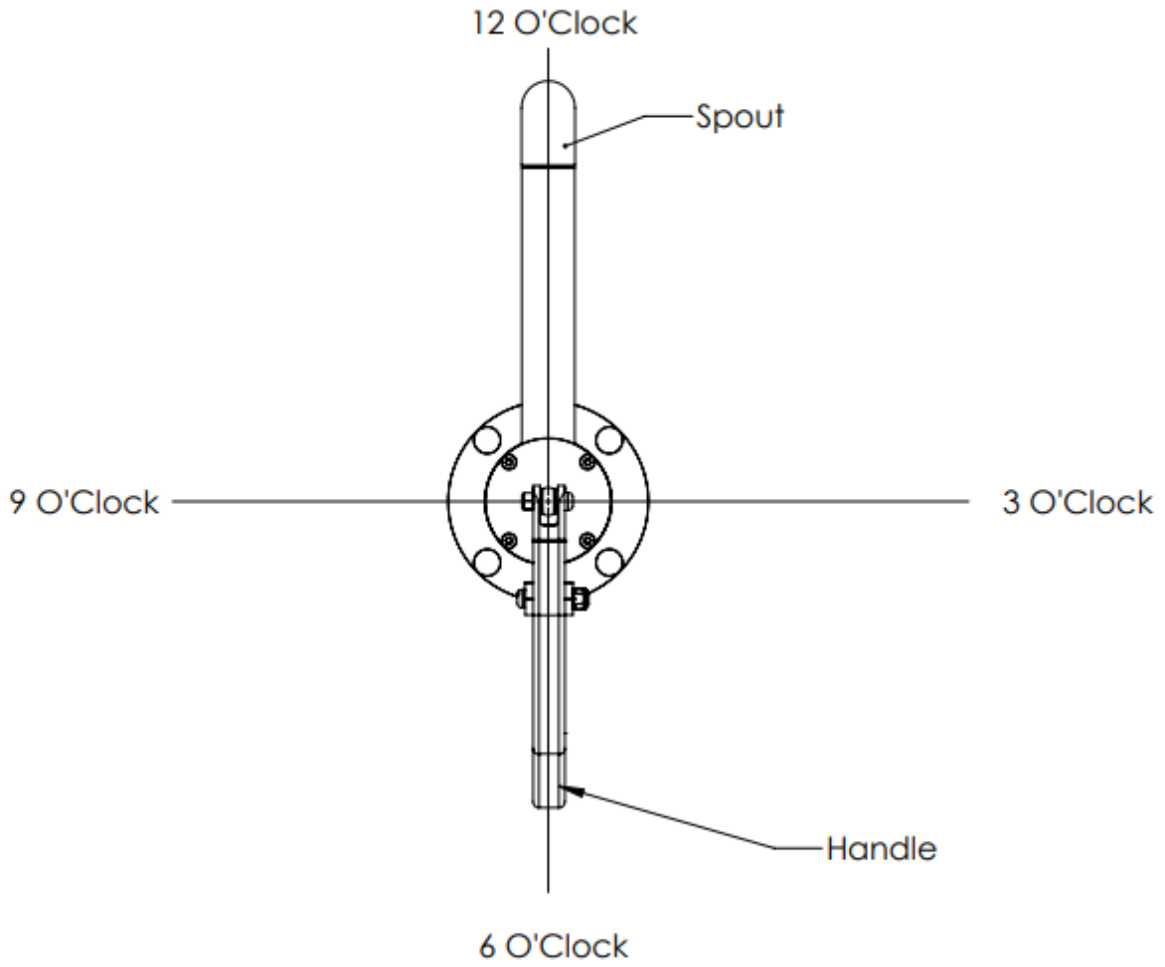
Detail B: Standard Installation



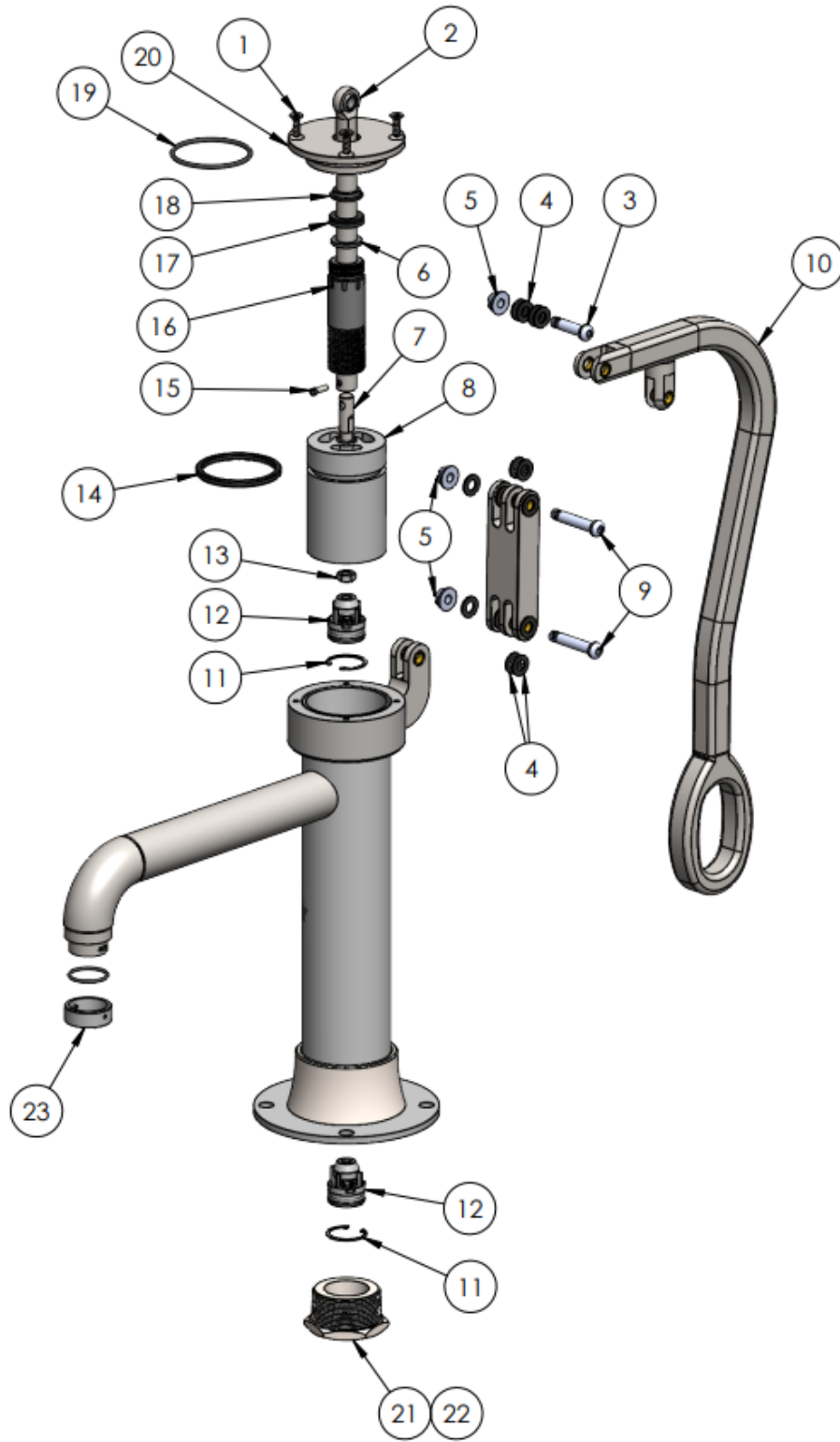
Detail C: Orientation of Installation



Detail D: Handle Orientation



Detail E: Exploded View



Detail F: Part Listing

Item No.	Part Number	Description	Quantity
1	04-000-1-55-01	Top Plate Security Bolt	4
2	60-002-0-14-01	Lift Rod Assembly	1
3	60-002-0-03-06	Handle Shoulder Bolt	1
4	60-002-0-03-11	Link Washer	16
5	04-000-1-55-02	Security Nut	3
6	60-002-0-03-08	Packing Gland Backing Washer	1
7	60-002-0-04-07	Connecting Lift Rod	1
8	60-001-0-04-02	Piston	1
9	60-001-9-03-10	Link Shoulder Bolt	2
10	---	Handle Assembly	1
11	04-022-1-68-01	Internal Snap Ring	2
12	04-000-5-75-01	Check Valve	2
13	04-000-1-50-21	Piston Low-profile Ny-Loc Nut	1
14	04-002-3-71-07	Piston Cup Seal	1
15	50-001-0-04-05	Lift Rod Connector Screw	1
16	60-002-0-07-00	Gland Nut	1
17	04-001-3-71-03	Packing Gland Cup Seal	1
18	60-002-0-08-05	Bottom Bushing	1
19	04-139-3-70-02	Top Plate O-Ring	1
20	60-002-0-06-00	Top Plate	1
21	04-029-0-74-01	Reducer Bushing (2" to 1 ¼") (Opt.)	1
22	04-029-0-74-02	Reducer Bushing (2" to 1") (Opt.)	1
23	65-001-0-35-01	Straight Spout Adapter Kit	1