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BISON DEEP WELL HAND PUMP INSTALLATION INSTRUCTIONS

WARNING: All pumps are shipped with a stainless steel male pipe thread hose adapter. You may want to check local codes to see if a hose Bibb backflow preventer should be used when connecting a hose to the hose adapter on the pump. CONSULT YOUR LOCAL PLUMBING CODE!!

Inspect the contents of the box to be sure everything you ordered has been received. Be sure to check the serial number on the pump head assembly to verify it matches the serial number on your invoice/packing list.

Read All Instructions Before Beginning the Actual Pump Installation

DO'S & DON'TS FOR PUMP INSTALLATION

- **DO NOT** begin the installation without first reading the entire instruction booklet, studying and understanding the diagrams.
- **DO NOT** begin the installation of the pump without first checking the water level in your well to be sure you have enough pipe and rod to install the pump cylinder at least 20' below the static water level.
- **DO NOT** over tighten the 1 ¼" pvc piping into the pvc female pipe thread bell end of the sch. 120 plastic pipe. The pipe can be threaded with a pair of pliers or a 12" pipe wrench.
- **DO NOT** use large pipe wrenches for the assembly of the pvc piping.
- **DO NOT** install the pump during a thunder and lightning storm. Be aware of any overhead power lines.
- **DO NOT** hurry the installation of your pump. Think before you act.
- **DO NOT** screw multiple lengths of pipe and rod together, laid out on the ground, and then try to lift all the pipe and rod to a vertical position to lower it into the well.
- **DO NOT** lower the pump and pipe sections into the well by the safety rope. Grab the pipe securely with both hands and lower the pipe, cylinder and safety rope into the well **8' at a time**, using the paddle as a stop. The safety rope should be tied off to a secure object, i.e. the well casing so that it can be lowered slowly and safely. This applies for pipe and rod removal as well; **8' at a time**.

If you are going down more than 14 lengths of pipe and rod, mechanical means of lowering them into the well is recommended along with the Bison lifting tool. Gloves are recommended when handling rope.



- **DO** read the installation instructions and study all diagrams. Begin the installation when you are confident you understand the instructions completely.
- **DO** have another person help you with the installation. If you are not comfortable with the mechanics of the installation, we suggest you hire the services of a licensed plumber, pump installer or well driller.
- **DO** make sure one end of the safety rope is securely tied to the cylinder and the other end to a secure object such as the well casing.
- **DO** turn the electricity off to the electric submersible pump before beginning the installation if you are installing the hand pump in the same well as the electric submersible.
- **DO** use the paddle provided to aid in the installation of your pump.
- **DO** thread the ends of the rods together so they butt up against each other then tighten the lock nuts with ½" & 9/16" open end wrenches.
- **DO** use Teflon tape on any male pipe threads which are not already taped before you screw them together.

Note: Bison Pumps and any of its affiliates will not be held responsible for defects or damage to this product due to inexperienced or negligent workmanship during installation of the pump and associated parts.

INSTALLATION INSTRUCTIONS

(Bison Pumps recommend two people be involved for ease of installation.)

REQUIRED TOOLS: ½" and 9/16" open end wrenches, pliers, vice grips

STEP #1 - Make sure you have read and understand the installation instructions.

STEP #2 - If you are installing the pump in a well casing specifically dedicated to a hand pump, go to **STEP #6**.

STEP #3 - If you are installing your Bison Deep Well Hand Pump in the same casing as an electric submersible pump or piping which connects to a jet pump, proceed as follows:

STEP #4 - Remove the existing well cover or well seal, whichever you may have and set it aside. **If you have a submersible pump, be sure to shut the electricity off to the pump before beginning the installation of the Bison Hand Pump**



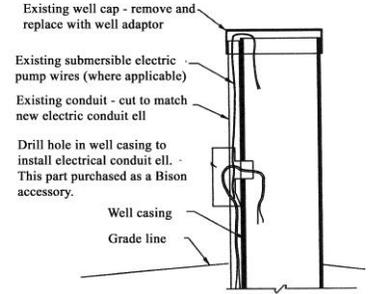
If you are installing in the same casing as an electric submersible pump, in most cases the electrical wires exit the top of the casing then run back down to the ground with a piece of conduit.

BPN-375C

Side-Mount Conduit Ell

Using a bi-metal hole saw, drill a hole through the side of the well casing 3-4” below the top of the casing then install the electrical conduit ell (BPN-375C – offered as an accessory by Bison Pumps).

This will allow you to pass the wire from outside the casing through the conduit ell to the inside of the casing where you can re-connect the wires to the submersible pump.



NOTE: If you are bringing the submersible pump wires out of the top of the well adapter, purchase the BPN-375-TM (top-mount conduit ell).

STEP #5 - You may need to lift your submersible pump or deep well jet assembly and foot valve in order to pass the Bison Pump Cylinder by the Pitless adapter (pictured) in your well casing. To avoid this step, you may want to select a smaller Bison Pump cylinder.

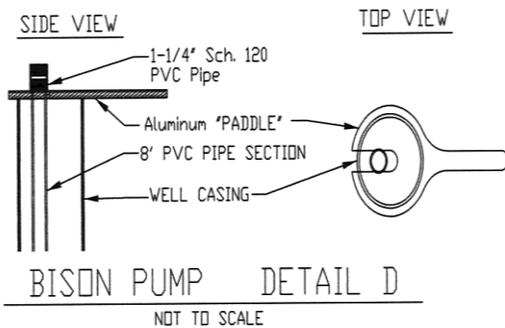


STEP #6 - Remove the Bison Pump Cylinder from the box. Remove the red plastic plug from the pump cylinder and discard.

STEP #7 - Start the assembly of your Bison Pump. If you have purchased a complete kit, you will notice the safety rope has been securely tied to the pump cylinder when you received your pump. Tie the other end of the rope to a secure object, i.e. the well casing, temporarily. The safety rope will be tied to the 1/4" eye bolt on the underside of the well adapter in step #13. (See Detail "A").

STEP #8 – *Note: when you receive your rod, one of the lock nuts will already be tightened securely.* Assemble your first piece of 3/8" stainless steel rod to the rod protruding from the cylinder. Pull the rod in the Bison Pump Cylinder all the way to the top to connect the first rod. As you assemble the stainless steel rod, screw the rod into the coupling until the two rod ends butt up against each other. Use pliers to lock the rods together. Be sure to tighten the 3/8" stainless steel jam nuts on both sides of the rod coupling. We recommend as you connect each rod thereafter, thread on the Rod Retrieval Tool to pull rod up as far as you can and connect a pair of vice grips to hold the rod in place while you secure the coupling and tighten the lock nuts. This should be done each time.

STEP #9 - Screw the PVC male end of the first 8' section of pipe into the female thread in the head of the pump cylinder. Use Teflon tape or pipe dope compound on all pipe threads.



STEP #10 - Lower the cylinder and the first 8' section of piping into the well. Using the slotted aluminum paddle you received with your pump, slide it under the PVC bell end of the pipe and rest the paddle on top of the well casing. This will hold the pipe in place while you assemble the rod and pipe. Continue to connect the 3/8" rod sections and PVC pipe until you have lowered all of the pipe into the well.

STEP #11 – Attach the rod retrieval tool to the last section of rod and pull all the way up. Attach vice grips to hold the rod up from the pipe.

STEP #12 - Remove the 3/8" Allen head shoulder bolt at the top of the handle connection to the lift rod of the pump head (See Detail "A").

STEP #13 - Screw the 3/8" rod that is protruding from the bottom of the well head into the last rod sticking out of the PVC pipe. Tighten these rods together using pliers or vice grips and a 9/16” wrench. Thread the jam nut up against the lift rod and tighten. Screw the Well Head into the PVC bell end of the pipe. (This step is performed more easily with two people.)

STEP #14 - Tie the end of the safety rope to the 1/4" eye bolt on the underside of the well adapter (See Detail "A"). Set the well adapter and pump head onto the casing, squarely and straight; then evenly tighten the (4) stainless steel nuts on top of the well adapter. Tighten the (4) allen head set screws on the well adapter to secure it to the casing. Check to make sure the pump head is square and straight on the well casing; making sure all the bolts are tight. Place the (4) rubber boots on the allen head set screws of the well adapter. Reconnect the pump handle to the lift rod with the 3/8" Allen head shoulder bolt. **Do not over tighten the shoulder bolt as this will cause the pump handle to pump hard.**

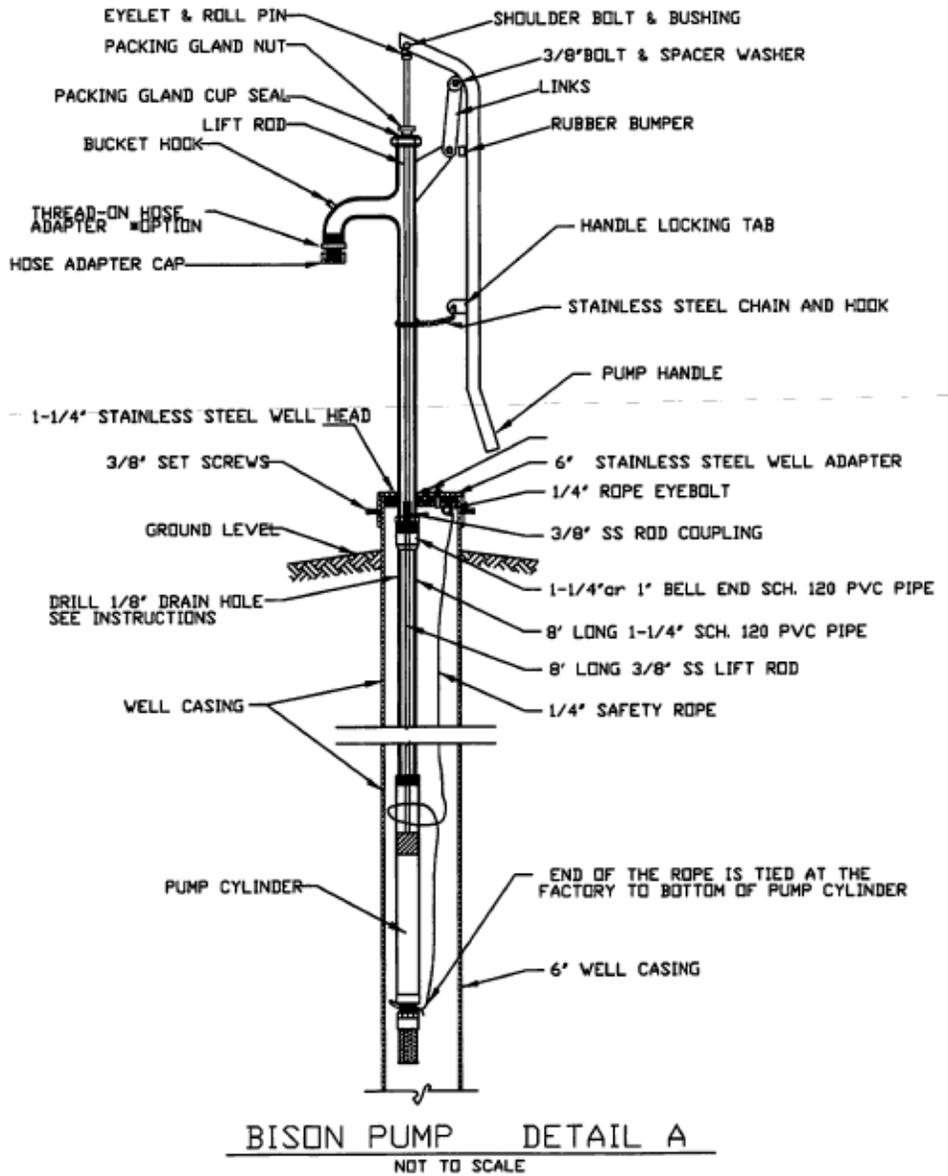
STEP #15 - Pump the handle on your Bison Deep Well Hand Pump and enjoy a cold glass of water directly from your well.

If you are currently treating the water in your home, remember that the water you pump directly from your well is untreated water. Bison Pumps recommends that you have your water tested to be sure that it is good quality potable drinking water.

Additional Installation Tips:

1. If you live in an area that experiences freezing temperatures, be sure to drill an 1/8" hole in the 1 1/4" PVC pipe approximately 6' to 7' below the well adapter. If you experience freezing temperatures that could have a frost penetration deeper than 7', drill the hole lower on the 1 1/4" PVC pipe. (See Detail "A")
2. On the top of the pump body is a gland nut which the lift rod slides through when pumping your hand pump. *This nut should be hand tight*. If there is leaking through this nut when pressurizing a vessel, then tighten this gland nut a quarter turn. **Do not overtighten** as this may cause difficulty in pumping your hand pump or damage to your lift rod.
3. If you experience any deficiencies or malfunction of your Bison Deep Well Hand Pump, please call 1-800-339-2601 for assistance and answers to your specific questions or concerns.
4. **Be sure to check local plumbing codes in your area to verify your installation meets all code requirements.**
5. You will notice a handle locking loop is attached to your pump handle along with a stainless steel chain and hook. If you choose, you can use either a paddle lock or a cable lock to secure the handle to the pump when not in use. Locking the handle is totally optional.
6. You will also notice that a brass hose bibb cap is shipped with the hose bibb adapter. This cap can be tightened to the hose bibb to keep insects out when the pump is not in use. **Caution: In the winter months, be sure to let the pump drain back completely before securing the brass cap. You may not want to use the cap during the winter.**
7. Thank you for investing in a Bison Deep Well Hand Pump.

BISON DEEPWELL HAND PUMP PARTS BREAKDOWN



Part Numbers	Options DW Hand Pump
BPN-330C	Check Valve for Pressurizing Tanks
BPN-375C	Conduit Ell (Side-Mount)
BPN-375-TM	Conduit Ell (Top-Mount)