

WASSERMANN 4STM4-6/230

WASSERMANN 4-inch Deep Well Submersible Pump Instruction Manual

Model: 4STM4-6/230

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your WASSERMANN 4-inch Deep Well Submersible Pump, Model 4STM4-6/230. Please read these instructions thoroughly before installation and operation to ensure proper function and to prevent damage or injury. Keep this manual for future reference.

2. SAFETY INFORMATION

Adhering to safety precautions is crucial for preventing personal injury and equipment damage. Always follow local electrical and plumbing codes.

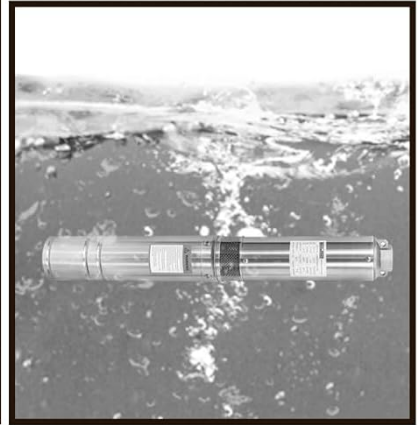
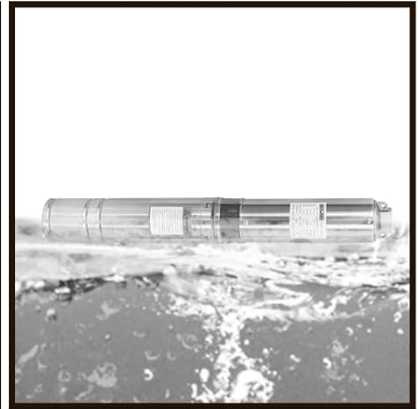
- **Electrical Safety:** Ensure all electrical connections are made by a qualified electrician. Disconnect power before performing any service or maintenance. The pump operates on 230V/60HZ.
- **Water Quality:** This pump is designed for pumping **non-corrosive clear water only**. Pumping sand or abrasive materials will clog and damage the pump. Consider installing a good filter to prevent abrasives.
- **Dry Running:** **Never run the pump dry**. The pump must be fully submerged in water during operation to prevent overheating and damage.
- **Positioning:** Do not place the pump horizontally. It must be installed vertically in the well.
- **Check Valve:** Install an external check valve at the outlet pipe to prevent backflow and water hammer, which can damage the pump.
- **Well Depth:** Ensure the diving depth does not exceed 230 feet.
- **Well Clearance:** Maintain a minimum distance of 9.8 feet between the bottom of the pump and the bottom of the well.



The pump body should be under the water level when it is running.



Do not run pump dry!
Do not place horizontally!



This pump is for clean water, pumping sand will clog the pump. Installing a good filter may prevent the pumping of abrasives.

Figure 2.1: Correct and Incorrect Pump Operation

3. PRODUCT OVERVIEW AND FEATURES

The WASSERMANN 4-inch Deep Well Submersible Pump is designed for efficient water extraction from deep wells, suitable for various applications including domestic water supply, agricultural irrigation, and livestock farming.

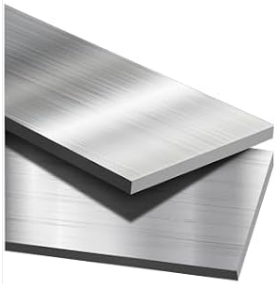
Key Features:

- **High Performance:** 1HP motor, 33 GPM maximum flow rate, and 190 feet maximum head lift.
- **Durable Construction:** Features a high-quality stainless steel body and SS304 pump head for extended service life.
- **Integrated Control:** A 2-wire pump with a built-in control box, eliminating the need for an external control box.
- **Efficient Design:** Equipped with a multistage floating impeller and an all-copper motor for reliable operation.
- **Easy Connection:** 1-1/4 inch FNPT outlet for standard plumbing connections.
- **Power Cable:** Includes a 10-foot power cord.

SS304
stainless steel
pump head

Rope hole

Stainless steel
inlet filter screen



Stainless
steel
body



Multistage floating
impeller



All copper motor



High toughness
pressure relief oil sac

Figure 3.1: Pump Components



Figure 3.2: High Quality Motor and Rotor



Figure 3.3: Multiple Filtration Mesh



1-1/4" FNPT



**Stainless Steel
Filter Screen**

Stainless Steel Base



10 FT Power Cord

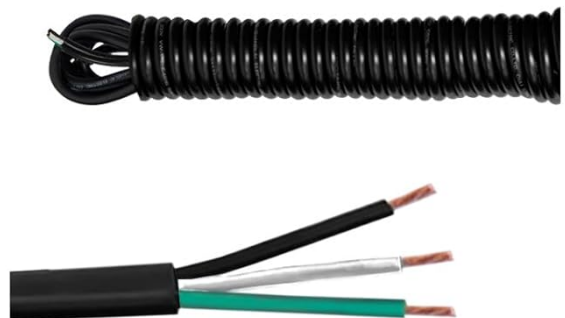


Figure 3.4: Key Pump Features and Components

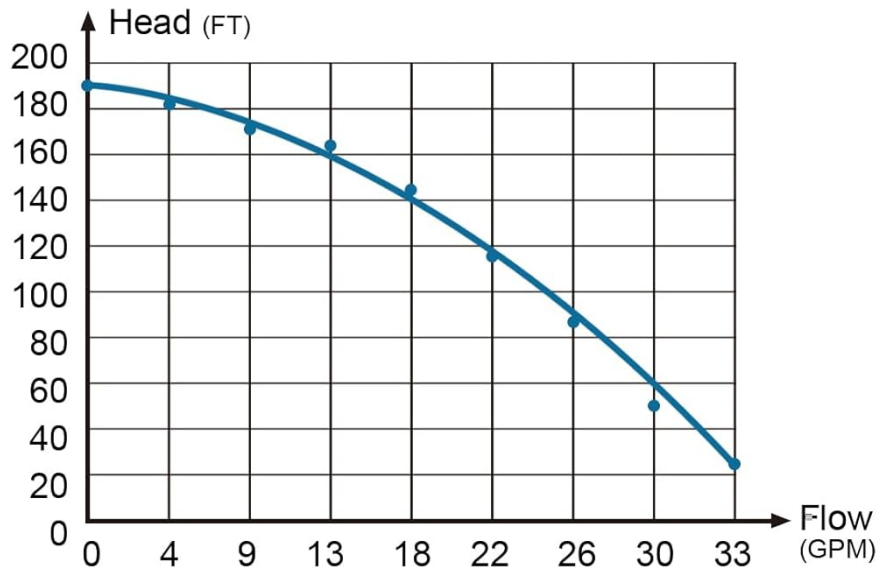
4. SPECIFICATIONS

Detailed technical specifications for the WASSERMANN 4-inch Deep Well Submersible Pump, Model 4STM4-6/230.

Parameter	Value
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Parameter	Value
Model Number	4STM4-6/230
Rated Power	1 HP (750W)
Rated Voltage	230V / 60HZ
Maximum Flow Rate	33 GPM (Gallons Per Minute)
Maximum Head Lift	190 FT
Outlet Diameter	1-1/4 inch FNPT
Pump Diameter	3.74 inches (for 4 inch well casings and bigger)
Product Dimensions	28.23 x 3.74 x 3.74 inches
Item Weight	28.6 pounds (13.02 Kilograms)
Material	Stainless Steel (SS304 pump head)
Power Cord Length	10 FT
Included Components	Deep Well Pump, Electrical Tape, Use Manual, Waterproof Tape

PRODUCT SPECIFICATIONS



Power: 1HP/750W	Max.Head: 190 FT
Voltage: 230V/60HZ	Max.Flow: 33 GPM

Figure 4.1: Product Specifications and Performance Curve

5. SETUP AND INSTALLATION

Proper installation is critical for the pump's performance and longevity. Follow these steps carefully.

5.1 Pre-Installation Checks

- Verify that the well casing is at least 4 inches in diameter.
- Ensure the power supply matches the pump's requirements (230V/60HZ).
- Inspect the pump for any visible damage before installation.

5.2 Wire Connection

The pump comes with a 10-foot power cord. If an extension cord is needed, ensure it is rated for outdoor submersible use and properly sized for the pump's power requirements. Follow these steps for a waterproof electrical connection:

1. Identify the Live, Neutral, and Ground wires from both the pump cable and the extension cord (if used).
2. Securely cross-wind the copper wires of corresponding colors together.
3. Apply electrical tape (included) tightly around each individual wire connection to insulate it.
4. Wrap waterproof tape (included) over the electrical tape on each connection, ensuring a complete seal.

5. Group the wrapped wires together and apply another layer of waterproof tape over the entire group.
6. For final protection, wrap electrical tape over the waterproof-wrapped wire group.

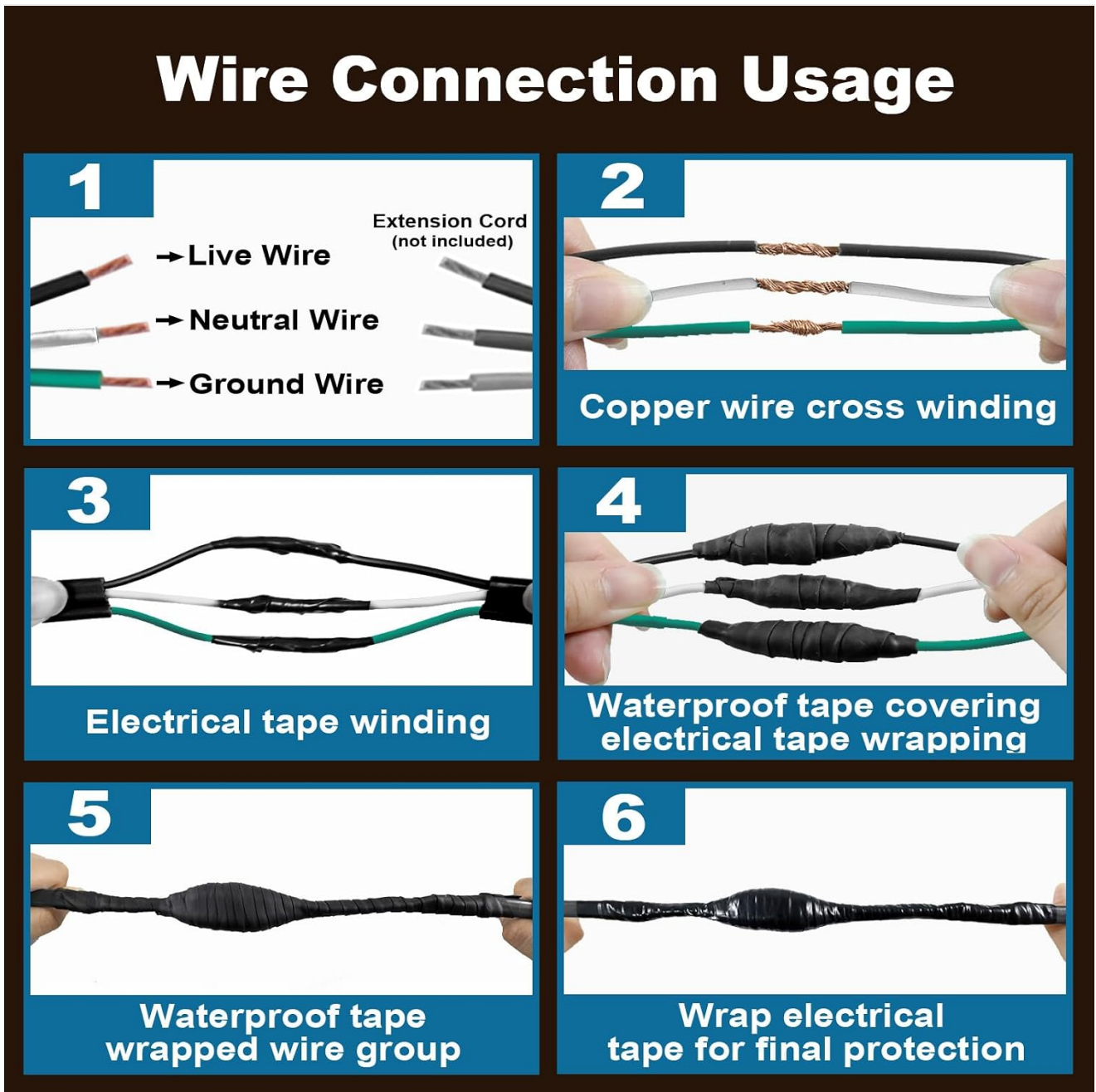


Figure 5.1: Wire Connection Usage

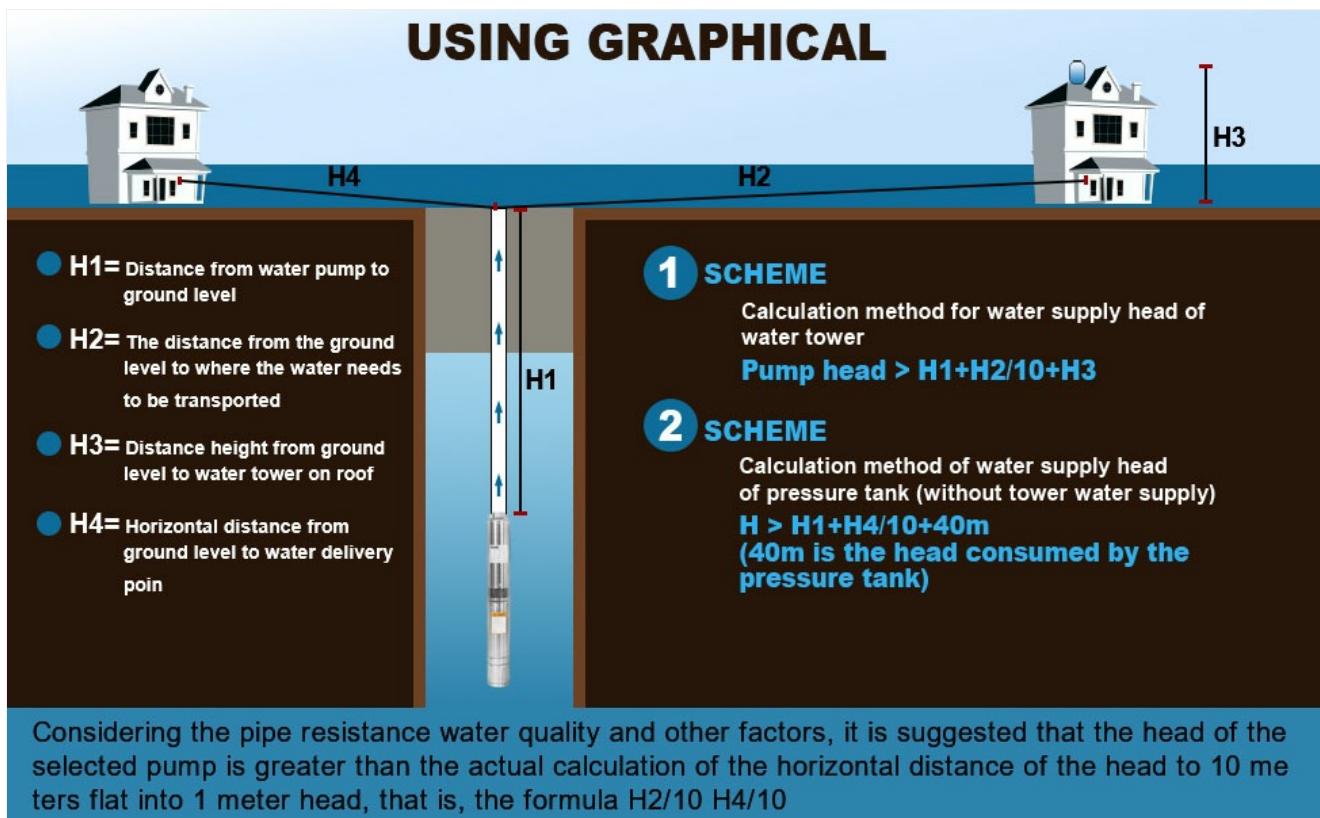


Figure 5.2: Detailed Wire Connection Steps

5.3 Pipe Connection and Lowering the Pump

1. Apply thread seal tape (Teflon tape) to the threads of the pump's outlet.
2. Connect the discharge pipe to the pump's 1-1/4 inch FNPT outlet. Ensure a tight, leak-free connection.
3. Install an external check valve in the discharge pipe, above the pump, to prevent water backflow.
4. Attach a wire rope or nylon rope to the designated rope holes on the pump head. This rope will be used to lower and retrieve the pump. **Do not use the power cable to lower or lift the pump.**
5. Carefully lower the pump into the well using the rope. Ensure the power cable is secured alongside the discharge pipe to prevent it from snagging or getting damaged.
6. Observe the following depth requirements:
 - o The water outlet must be at least 16.4 feet below the dynamic water level.
 - o The maximum diving depth for the pump is 230 feet.
 - o Maintain a minimum distance of 9.8 feet between the bottom of the pump and the bottom of the well.



Figure 5.3: Applying Thread Seal Tape



Figure 5.4: Pump Outlet Connection



Figure 5.5: Rope Attachment Points



Figure 5.6: Hose Clamp Connection

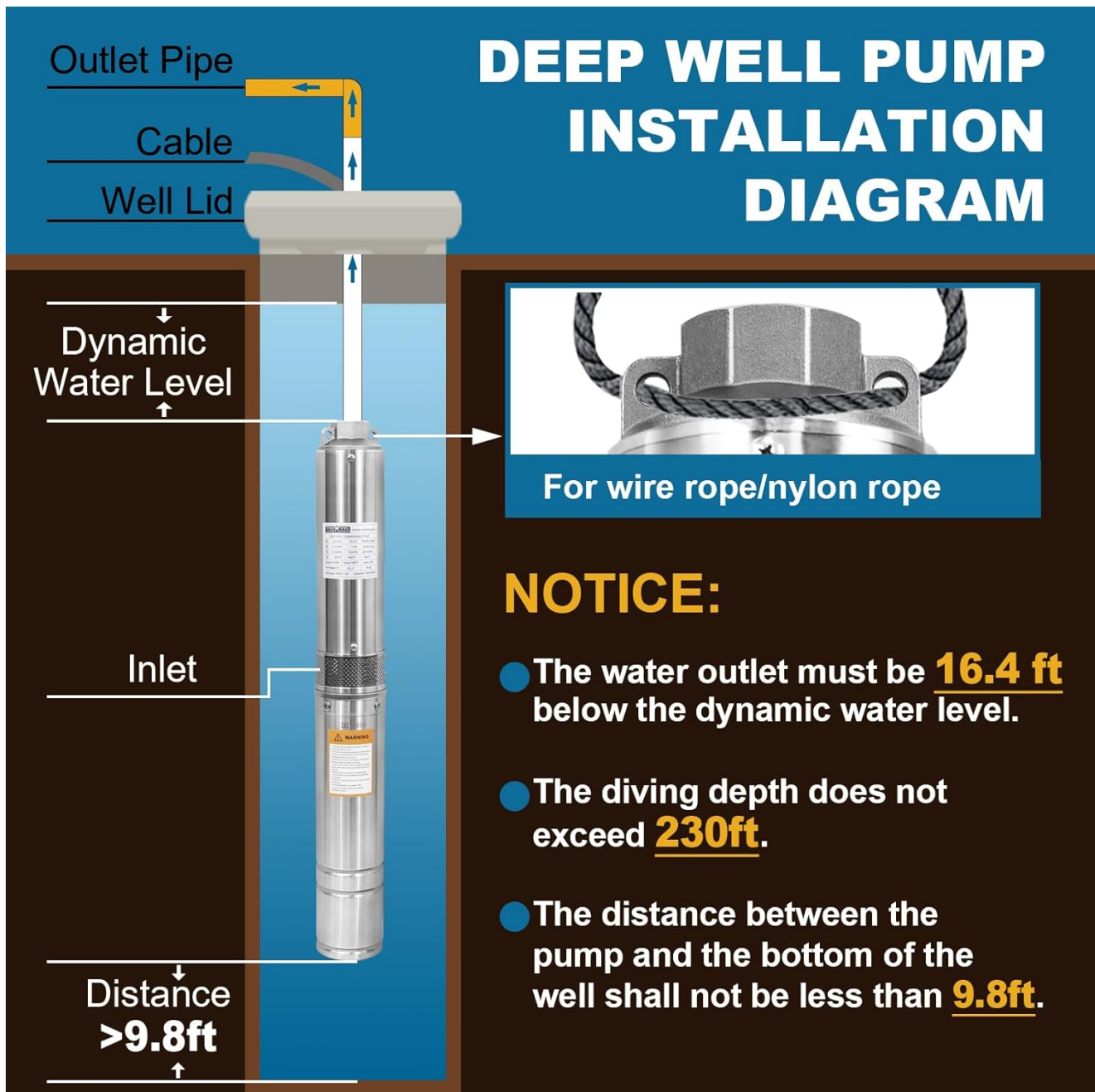


Figure 5.7: Deep Well Pump Installation Diagram

5.4 Head Calculation for Water Supply

When selecting a pump, it is important to calculate the required head to ensure adequate water supply. The pump's head should be greater than the calculated total head.



6. OPERATING INSTRUCTIONS

Once installed, operating the WASSERMANN submersible pump is straightforward due to its built-in control box.

1. **Initial Start-up:** After installation, ensure all connections are secure and the pump is fully submerged. Restore power to the pump. The pump should begin operating.
2. **Continuous Operation:** The pump is designed for continuous operation as long as it remains submerged in clear, non-corrosive water.
3. **Monitoring:** Periodically check the water flow and pressure to ensure optimal performance. Any significant drop may indicate an issue.
4. **Shut Down:** To stop the pump, disconnect its power supply.

Important Operating Considerations:

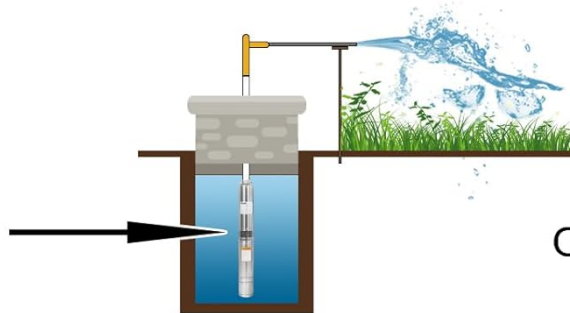
- Ensure the pump body is always under the water level when it is running.
- Do not run the pump dry, as this will cause severe damage.
- This pump is not designed for pumping water containing sand, silt, or other abrasive particles. Such materials will cause premature wear and failure.

LARGE FLOW HIGH HEAD LIFT



Max.Head: **190 FT**

Max.Flow: **33 GPM**



WARNING:
Operates in non-corrosive
clear water

Figure 6.1: Pump Performance Overview

7. MAINTENANCE

The WASSERMANN submersible pump is designed for minimal maintenance. However, periodic checks can help ensure its longevity and efficient operation.

- **Regular Monitoring:** Listen for unusual noises or vibrations during operation. Observe water flow and pressure for consistency.
- **Check Valve Inspection:** Periodically inspect the external check valve for proper function. A faulty check valve can lead to frequent pump cycling or reduced pressure.
- **Power Cable Inspection:** If the pump is retrieved for any reason, inspect the power cable for any signs of wear, cuts, or damage. Ensure all waterproof seals are intact.
- **Clean Water Usage:** Always ensure the pump is operating in clear water. If the well water quality deteriorates, consider installing a pre-filter or sediment filter to protect the pump.
- **Winterization (if applicable):** In regions with freezing temperatures, ensure the pump and associated piping are protected from freezing if not in continuous use.

8. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your submersible pump.

Problem	Possible Cause	Solution
Pump does not start	No power supply Faulty wiring connection Motor overload protection tripped	Check power source and circuit breaker. Inspect wire connections for proper sealing and contact. Allow motor to cool; check for obstructions or dry running.
Low water pressure or flow	Clogged intake screen Pipe leakage Worn impeller Insufficient water in well Faulty check valve	Retrieve pump and clean intake screen. Inspect discharge piping for leaks. Contact service for impeller replacement. Check well water level. Inspect and replace external check valve if necessary.
Pump runs but no water delivered	Pump not submerged Air lock in system Discharge pipe blockage Faulty check valve	Ensure pump is fully submerged. Bleed air from the system. Check discharge pipe for obstructions. Inspect and replace external check valve.
Pump cycles frequently	Leaking plumbing system Faulty pressure tank (if applicable) Faulty check valve	Check all pipes and fixtures for leaks. Inspect pressure tank for proper air charge or diaphragm integrity. Replace external check valve.
Pump makes unusual noise	Pumping air or sand Mechanical issue Dry running	Ensure pump is fully submerged and water is clear. Retrieve pump for inspection by qualified personnel. Ensure pump is always submerged during operation.

If you are unable to resolve the issue using this troubleshooting guide, please contact customer support.

9. WARRANTY INFORMATION

Please refer to the warranty documentation provided at the time of purchase or contact the seller/manufacture for specific warranty terms and conditions. Keep your proof of purchase for warranty claims.

10. SUPPORT AND CONTACT INFORMATION

For technical assistance, spare parts, or any questions regarding your WASSERMANN 4-inch Deep Well Submersible Pump, please contact your retailer or the WASSERMANN customer service department.

Manufacturer: WASSERMANN

Website: [Visit the WASSERMANN Store on Amazon](#)

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