

Owner's Manual & Safety Instructions

Save This Manual Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

181



63401 63402

SUBMERSIBLE WATERFALL PUMP

2500/4500 GPH AT 0 FT **MAXIMUM FLOW**

19/23 ft **MAXIMUM HEAD LIFT
AT 0 FLOW**



63402

Visit our website at: <http://www.harborfreight.com>
Email our technical support at: productsupport@harborfreight.com

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-888-866-5797 as soon as possible.

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No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools. Diagrams within this manual may not be drawn proportionally. Due to continuing improvements, actual product may differ slightly from the product described herein.
Tools required for assembly and service may not be included.

⚠ WARNING

Read this material before using this product.
Failure to do so can result in serious injury.
SAVE THIS MANUAL.

Before start-up, note the following:

The pump must be connected to a GFCI protected plug which has been installed according to regulations. The plug must have a supply voltage of 120VAC at 60Hz.

CAUTION

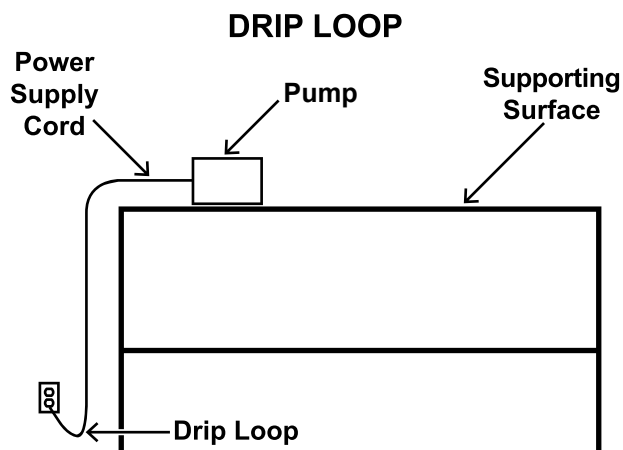
This pump has been evaluated for use with fresh water only.

⚠WARNING


IMPORTANT! For your own safety – before starting to run the pump, please have the following items checked by an expert:

1. Risk of electric shock – This pump is supplied with a grounding conductor and grounding-type attachment plug. To reduce the risk of electric shock, be certain that it is connected only to a properly grounded, grounding-type receptacle.
2. Risk of electric shock – This pump has not been investigated for use in swimming pool areas.
3. The electrical connections must be protected from moisture.
4. If there is danger of flooding, the electrical connections must be taken to higher ground.
5. Circulation of caustic fluids, as well as the circulation of abrasive materials, must be avoided at all costs.
6. The pump must be protected from frost.
7. The pump must be protected from running dry.
8. Access by children should also be prevented with appropriate measures.
9. To reduce the risk of electric shock, use only on portable self-contained fountains.
10. **POSITION OF PUMP:**

To avoid the possibility of the pump plug or receptacle getting wet, position pump to one side of a wall mounted receptacle to prevent water from dripping onto the receptacle or plug. The user should arrange a “drip loop” in the cord connecting the pump to a receptacle.



The “drip loop” is that part of the cord below the level of the receptacle, or the connector if an extension cord is used, to prevent water traveling along the cord and coming in contact with the receptacle.

11.  **To prevent death from electric shock, pump must be connected only to a GFCI protected outlet.**
12. Do not use an extension cord with this item.
13. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure.
14. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Fluid Type

The Pump is designed for use with fresh water with a maximum temperature of 95° F (35°C)—do not use for heated liquids. Do not use the Pump for other fluids, especially not fuels, cleaning fluids, or other chemical products. Do not use to pump salt water, highly chlorinated water, or water with a high pH level.

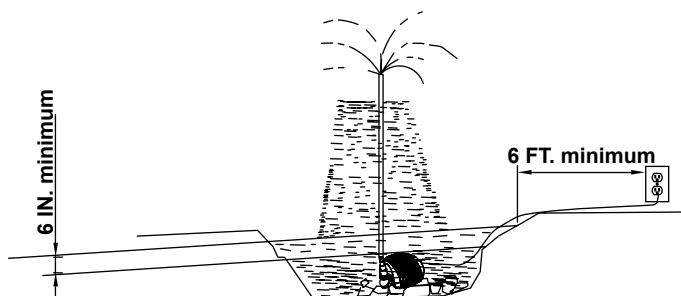
Specifications

	63401	63402
Electrical Rating	120VAC / 60Hz / 1.3A	120VAC / 60Hz / 2.45A
Power Cord Length	16'	16'
Maximum Flow @ 0'	2500 GPH	4500 GPH
Maximum Head lift @ 0 Flow	19'	23'
Discharge Port	1-1/2" NPT Thread	2" NPT Thread

Installation

The submersible motor pump must be installed in a stationary position with either:

- A fixed pipeline or
- A flexible hose pipe.



- Submerge the pump under water to prevent the pump from taking in air.


- The pond must be at least 6 feet away from the receptacle.
- To reduce wear on the pump, place the pump on a platform above mud, sand, small rocks, and other debris.
- If running with fountain jets, the pump must be mounted firmly and horizontally on a platform.
- Connect a discharge hose (not included) to the Hose Adapter (3).
- Connect the free end of the discharge hose to a waterfall basin, or similar device (none included).

Please note!

- Do not install the pump by suspending it unsupported from its delivery pipe or power cord. The pump must be suspended from the handle or be placed on the bottom of the basin. To ensure that the pump works properly, keep the bottom free from sludge and dirt of all kinds.
- If the water level sinks too low, any sludge in the basin will dry out and stop the pump from starting. To help ensure the pump will start as required, check the pump regularly with start-up tests.

Power Supply

- The Pump is equipped with a shock-proof plug according to regulations. The Pump is designed to be connected to a 120VAC, 60Hz GFCI protected socket.
- Make sure that the socket is sufficiently secured and is in excellent condition.
- When the plug is inserted into the socket, the pump will be on standby.

-  **WARNING: To prevent death from electric shock, pump must be connected only to a GFCI protected outlet.**

WARNING! If the power cord or plug is damaged, do not use the pump. The power cord or plug may only be repaired by a certified electrician.

WARNING! Pump must be positioned with a drip loop, as discussed under WARNING.

Areas of use

- This pump is designed to pump fresh water only.
- This pump is designed to be used for:
An area not used for swimming.

Operation

After reading these instructions, consider the following points before starting the pump:

1. Verify that the pump rests on the floor of the basin, if it is not suspended by the handle.
2. Verify that the discharge pipe is properly connected.
3. Verify that the electrical connection is 120VAC, 60Hz.
4. Verify that the electrical socket is GFCI protected and in good condition. Test GFCI protected outlet before use.
5. Verify that water and moisture cannot get near the power supply socket.
6. Verify that the pump is installed so as to prevent running dry. The inlet or top of the pump must be under water at all times.

⚠️WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:
Unplug the Pump from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.

If the pump is moved during operation, flush it out with clean water after every use.

Quarterly Maintenance

The below maintenance must be performed at least once every 3 months under optimal conditions. For frequent use, or dirty areas, more frequent maintenance is required.

1. Disconnect power cord.
2. Unsnap Inlet screen from Pump.
3. Clean and rinse sludge and debris from inlet screen and filter.
4. Use a small toothbrush or stream of water to remove any debris from the impeller. A garden hose can be used to rinse out the inlet hose and the delivery hose.
5. Replace inlet screen.
6. Dry hands before reconnecting power cord.

Troubleshooting

Problem	Possible Causes	Possible Solutions
Pump runs, but will not deliver any water.	<ol style="list-style-type: none"> 1. Inlet Screen and/or impeller clogged. 2. When starting, water level may fall below the minimum required to keep Pump completely submerged. 3. Low line voltage. 4. Check valve (sold separately) stuck or installed backwards. 	<ol style="list-style-type: none"> 1. Remove Inlet Screen. Clean out dirt and debris from Inlet Screen and impeller. Then replace Inlet Screen. 2. For proper operation after startup, Pump must remain completely submerged at all times. 3. Consult an electrician. 4. Remove and examine check valve.
Pump won't start or run.	<ol style="list-style-type: none"> 1. Check power connections and circuits/fuses. 2. Water level too low. 3. Filter, Inlet Screen and/or impeller clogged. 4. Defective motor. 5. Cord not connected. 6. Pump discharge or hose kinked or obstructed. 7. Impeller broken or jammed. 	<ol style="list-style-type: none"> 1. Consult an electrician. 2. Move Pump to a location where it is completely submerged at all times. 3. Remove Inlet Screen. Clean out Inlet Screen, filter, and impeller. Reinstall Inlet Screen. 4. Have a qualified service technician repair or replace. 5. Check that cord is plugged in. 6. Straighten hose and flush out with clear water. 7. Open pump and turn impeller to ensure it spins freely. Keep filter in place during use to prevent impeller damage.
Low flow	Impeller clogged.	Check and clean per instructions above.
Excessive noise or vibration.	<ol style="list-style-type: none"> 1. Debris in impeller. 2. Discharge hose restricted. 	<ol style="list-style-type: none"> 1. Remove Inlet Screen. Clean impeller. Reinstall Inlet Screen. 2. Clean Pump and discharge hose.
Pump starts and stops too frequently.	<ol style="list-style-type: none"> 1. Water temperature too high. 2. Check valve (sold separately) stuck or installed backwards. 3. Back flow of water from discharge hose. 	<ol style="list-style-type: none"> 1. Do not exceed 95° F (35°C) water temperature. 2. Remove and examine check valve. 3. Install or inspect check valve (sold separately).



Follow all safety precautions whenever diagnosing or servicing the tool.
Disconnect power supply before service.

PLEASE READ THE FOLLOWING CAREFULLY

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Parts List

Part	Description	Qty.
1	Front Cover	1
2	Connector	1
3	Pump House	1
4	Sealing Ring	1
5	Impeller	1
6	Rotor	1
7	Screws	4
8	Pump Holder	1
9	Pump Body	1

Part	Description	Qty.
10	Stainless Cap	1
11	Stator	1
12	Coil	2
13	Magnet Wire	2
14	Capacitor	1
15	Back Cover	1
16	Power Cord	1
17	Plug	1

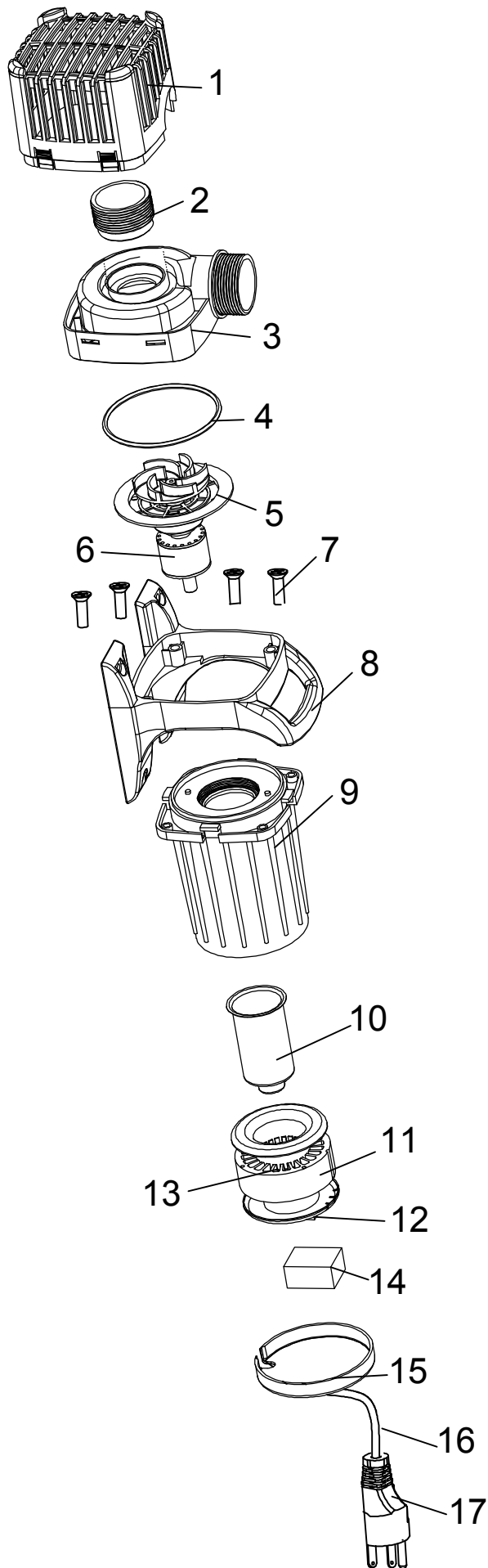
Record Product's Serial Number Here: _____

Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts. Parts may not be interchangeable. Specify number when ordering.



Assembly Diagram



Limited 90 Day Warranty

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.



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