

1/2 HP AND 3/4 HP DIRTY WATER SUBMERSIBLE PUMP

**Model: Q1DP-400E
Q1DP-550E**

ASSEMBLY AND OPERATION INSTRUCTIONS



Due to continuing improvements, actual product may differ slightly from the product described herein.

**TO PREVENT SERIOUS INJURY, READ AND UNDERSTAND
ALL WARNINGS AND INSTRUCTIONS BEFORE USE.**

Specifications

Motor	115 V, 60 Hz, 400W/550W	Min. Water Level	4"
Pump Cord	25 Ft. - 3 Prong Plug	Operating Temp.	95° F.
Discharge Size	1-1/2"	Min. Switch Level	3"
Discharge Fittings	1", 1-1/4", and 1-1/2"	Overall Dimensions	6.5" Dia. x 12.375" H
Delivery Height	16.6 Ft. / 23 Ft.	Housing Material	PP Plastic
Flow Rate	2000GPH / 2800GPH	Intake Filter	None
Horsepower	1/2HP / 3/4HP	Motor Drive	Magnetic Drive
Max. Particle Size	1"		

Warning: The pump should not be submerged in water deeper than the length of the power cord, which is 25 feet long.

Save This Manual

You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.

Safety Warnings and Precautions

WARNING: When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment. Read all instructions before using this tool!

1. **Keep work area clean.** Cluttered areas invite injuries.
2. **Observe work area conditions.** Keep work area well lighted. Do not use electrically powered tools in the presence of flammable gases or liquids.
3. **Keep children away.** Children must never be allowed in the work area. Do not let them handle machines, tools, or extension cords.
4. **Store idle equipment.** Always lock up tools and keep out of reach of children.
5. **Do not force Pump.** It will do the job better and more safely at the rate for which it was intended. Do not use inappropriate attachments in an attempt to exceed the Pump capacity.
6. **Use the right Pump for the job.** Do not attempt to force a small Pump or attachment to do the work of a larger industrial Pump. There are certain applications for which this Pump was designed. Do not modify this Pump and do not use this Pump for a purpose for which it was not intended.
7. **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically nonconductive clothes and nonskid footwear are recommended when working. Wear restrictive hair covering to contain long hair.

8. **Use eye and ear protection.** Always wear ANSI approved impact safety goggles. Wear an ANSI approved dust mask or respirator when working around metal, wood, and chemical dusts and mists.
9. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across running machines.
10. **Maintain Pump with care.** Inspect tool cords periodically and, if damaged, have them repaired by an authorized technician.
11. **Avoid unintentional starting.** Dry running of the Pump causes excess wear.
12. **Stay alert.** Watch what you are doing, use common sense. Do not operate any Pump when you are tired.
13. **Check for damaged parts.** Before using any Pump, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function.
14. **Guard against electric shock.** Prevent body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerator enclosures. It is strongly recommended that this Pump be plugged into a Ground Fault Circuit Interrupter (GFCI). Ask a local electrician for easy installation instructions. **To avoid electrical shock, no person or animal should be in contact with the water being pumped. Never walk on wet or damp area when pump is running in the same room.**
15. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty.
16. **Do not operate Pump if under the influence of alcohol or drugs.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the Pump.
17. **Use proper size and type extension cord.** If an extension cord is required, it must be of the proper size and type to supply the correct current to the tool without heating up. Otherwise, the extension cord could melt and catch fire, or cause electrical damage to the tool. This tool requires use of an extension cord of **0 to 10 amps** capability (up to 50 feet), with wire size rated at **18 AWG**. Longer extension cords require larger size wire. If you are using the tool outdoors, use an extension cord rated for outdoor use. (signified by "WA" on the jacket). **Note: Do not make the extension cord connection underwater.**
18. **Maintenance.** For your safety, maintenance should be performed regularly by a qualified technician.
19. **Do not pump hazardous materials.** Do not pump explosive or flammable materials such as Fuel Oil, Kerosene, Gasoline etc. Do not pump in close proximity to flammable or explosive materials. Do not pump fats, oils, salt or waste water. This Pump is designed to move clean or dirty water. Do not pump hot liquid.
20. **Water transfers in cycles.** Do not attempt to manipulate the switch to keep Pump running continuously. It is meant to shut off intermittently. Doing so will damage the Pump.

Note: Performance of this Pump (if powered by line voltage) may vary depending on variations in local line voltage. Extension cord usage may also affect Pump performance.

Warning: The warnings, cautions, 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.

Installation

Reminder: This Pump should be plugged into an outlet fitted with a Ground Fault Circuit Interrupter (GFCI).

Note: Hose connection is covered on page 7.

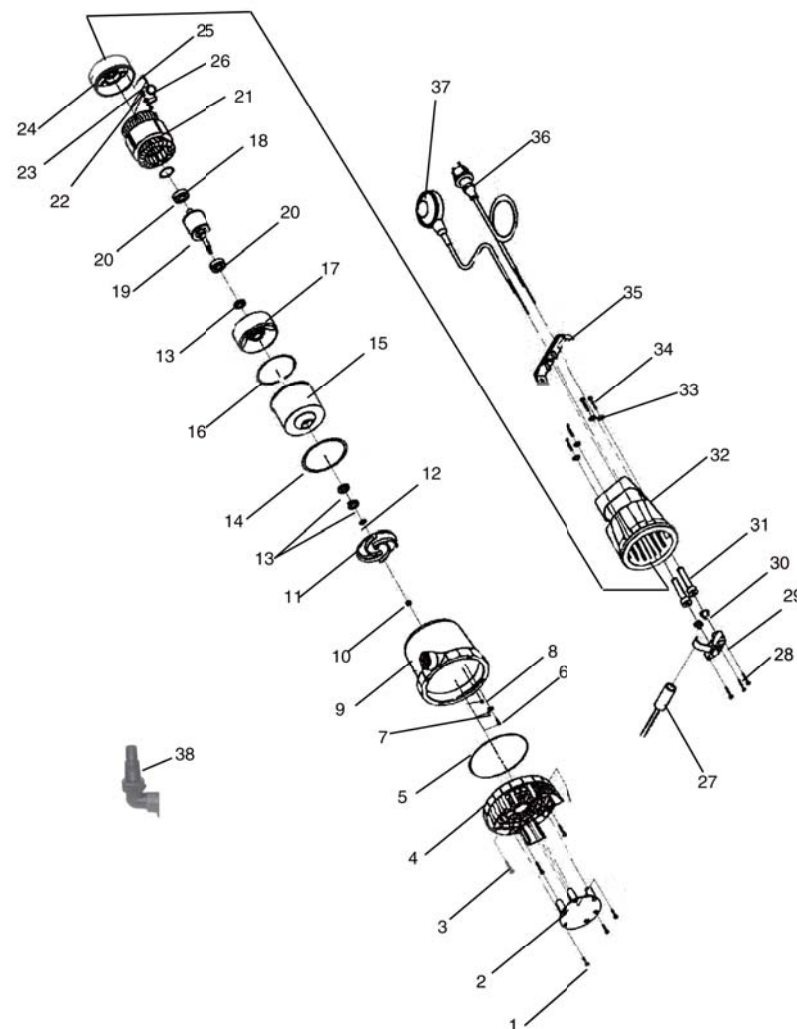
1. Make sure the Pump rests on a flat, level, and solid foundation. Never operate on earth, clay, sand, or gravel surfaces.
2. Never suspend the pump from the power cord or discharge pipe. You may firmly attach a rope to the carry handle.
3. Keep the pump inlet openings, near the suction base, clear of debris.
4. Avoid installation in areas of extreme heat or cold.
5. If the piping you install runs in excess of ten feet, it is recommended you use a check valve (not included) to prevent back flow, which could lead to rapid cycling. To avoid air locks in the pump, drill a 1/8" hole, in the piping, between the check valve and the pump.

Sump Installation (All instructions above apply)

1. The sump pit must have a minimum diameter of 11" and maximum depth of 18 feet.
2. Construct the pit of tile, plastic, concrete, or steel.
3. Set the pump on a brick or block slightly smaller than the pit. Fill the pit with clean 1" stones to surround the lower half of the pump, and keep it stable. The stones should be large enough to not clog any of the inlets.
4. Test pump (see Operation on page 5).
5. Install a sump cover to protect the pump from falling debris.

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Assembly Drawing



NOTE: Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.

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Parts List

Part	Description	Q'ty	Part	Description	Q'ty
1	Screw	3	20	Bearing	1
2	Lower base	1	21	Stator	1
3	Screw	4	22	Screw	1
4	Base	1	23	Earthing wire	1
5	O Ring	1	24	Rear cover	1
6	Screw	1	25	Spring washer #4	1
7	Washer	1	26	Washer	1
8	Ball	1	27	Condenser	1
9	Main housing	1	28	Screw	2
10	Locked nut	1	29	Pressure plate	1
11	Impeller	1	30	Cord clip	2
12	Adjuster washer	1	31	Cord jacket	2
13	Framework seal	3	32	Rear housing	1
14	Seal, Latex	1	33	Washer	4
15	Front cover	1	34	Screw	3
16	O Ring	1	35	Top cover of handle	1
17	Front bush	1	36	Power cable & plug	1
18	Bearing	2	37	Float switch	1
19	Rotor	1	38	Universal adapter	1

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

Operation

Warning: Do not run the pump dry. It will increase wear to the unit and possibly cause seal damage.

Note: This pump has a built-in thermal protector for the motor, which automatically shuts it off to avoid overheating. After it cools, it will cycle back on. Wait for the cycle to continue. Do not try to turn on the pump manually after it has cutoff.

1. Plug unit into an outlet fitted with a Ground Fault Circuit Interrupter (GFCI).
2. The pump will automatically turn on when the water level, or the sump, has filled to approximately 3" above the base. It will stop when the water level drops below 3". It will continue to recycle thereafter.
3. Check that the discharge water travels several feet from the foundation.

Float Switch Adjustment

There is a Float Switch Lock that is part of the Rear Cover (24). The Switch cord snaps into the Float Switch Lock (see page 7 figure B). You can adjust the level that the Pump turns on by adjusting the length of the Float Switch cord.

Note: If air bubbles are spotted around the handle or pressure switch, this is normal. It is trapped air escaping from the unit. This pump is equipped with a deaerating device which removes air locks in the pump. Also, if the water level drops below the Vent Valve (see page 7 figure B), some water might purge from the pump from the Vent Valve. This is normal. More on air escape covered in Troubleshooting.

Maintenance

Pump Motor Maintenance

1. Any repair or replacement of parts should be performed by a qualified service technician.
2. Inlets should be inspected periodically and any debris which clogs them should be removed (Before performing inlet cleaning, disconnect the pump from the outlet).
3. Periodically clean the **Lower Base (2)**. Remove the **Screws (1)** from the **Base (4)** and remove any dirt or debris. Replace the Lower Base (see page 8).

Troubleshooting

Problem 1: Pump runs but will not deliver any water.

Cause: Lower Base (2) clogged.

Solution: Remove the Screws (1) from the Lower Base (2) and remove Lower Base (2). Clean out dirt or debris and replace.

Cause: When starting, the pump water height falls below the minimum water level.

Solution: Submerge pump deeper.

Cause: Low line voltage.

Solution: Consult with an electrician.

Cause: Optional check valve stuck or installed backwards.

Solution: Remove and examine check valve.

Problem 2: Pump won't start or run.

Cause: No power or line voltage problem.

Solution: Check power connections and fuses. Consult with an electrician.

Cause: Water level too low.

Solution: Add more water to pump, or put pump in a lower location.

Cause: Thermal overload switch has activated.

Solution: See **Note** at the top of page 5.

Cause: Lower Base (2) clogged.

Solution: Remove the Screws (1) from the Lower Base (2) and remove Lower Base (2). Clean out dirt or debris and replace.

Cause: Tangled Float Switch (37).

Solution: Arrange so Float Switch (37) moves freely.

Cause: Defective motor or Float Switch (37).

Solution: Have a qualified service technician repair or replace.

Problem 3: Excessive noise or vibration.

Cause: Worn Bearings.

Solution: Have a qualified service technician repair or replace.

Cause: Debris in Impeller (10).

Solution: Remove the Screws (1) from the Lower Base (2) and remove Lower Base (2). Clean out dirt or debris and replace.

Cause: Discharge restricted.

Solution: Clean pump and piping.

Problem 4: Pump starts and stops too frequently.

Cause: Water temperature too high.

Solution: Never exceed temperatures above 95 degrees F.

Cause: Defective or entangled Float Switch (37).

Solution: Arrange the Float Switch (37) so that it moves freely.

Cause: Back flow of water from piping.

Solution: Install or inspect check valve (optional).

Note: Many problems occur due a clogged Lower Base (2). Remove the Screws (1) from the Lower Base (2) and remove the Lower Base (2). Clean out dirt or debris from the bottom of the Pump and replace Lower Base (2) using the same screws (see page 8).

Assembly

Hose Connection: The Universal Fitting (), in Figure B, connects to various hose sizes listed in Figure D. The hoses should be connected using a step nipple (not included). In addition, the 1" and 1-1/4" hoses should also be secured with hose clamps (not included). The largest connection (1-1/2") will yield the greatest flow. The top of the Universal Fitting may be removed to fit on various size hoses (see Figures B and D). Use a knife (Figure E) to gently slide off any unneeded material.

Note: Use a pipe joint sealant to ensure air tight operation.

Note: (Optional) To reduce vibration and noise, a short section of rubber hose (1-1/4" x 1-3/8" ID) may be attached to the discharge line, using clamps (Hose and Clamps not included).



**Hose Fitting Sizes
Figure D**

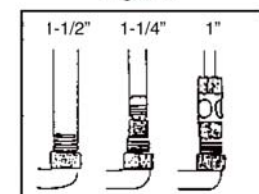


Figure E

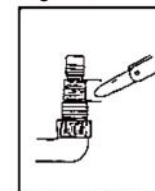


Figure C (Removing Base to clean Impeller)

