

Notice to installing contractor: Instructions must remain with installation.

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Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.



ZT0077_Ec
0818
Supersedes
0318

50/60 Hz

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INSTALLATION INSTRUCTIONS 374

These installation instructions are applicable for Model 374 Fountain/Pond/Waterfall Pump only.
This pump system is designed for decorative use and can improve water aeration.





PREINSTALLATION CHECKLIST - ALL INSTALLATIONS

1. **Inspect your unit.** Occasionally, products are damaged during shipment. If the unit is damaged, contact your dealer before using. **DO NOT** remove the test plugs in the cover.
2. **Carefully read the literature** provided to familiarize yourself with specific details regarding installation and use. These materials should be retained for future reference.



WARNING

SEE BELOW FOR LIST OF WARNINGS

1. Make certain that the receptacle is within the reach of the pump's power supply cord. **DO NOT USE AN EXTENSION CORD.** Extension cords that are too long or too light do not deliver sufficient voltage to the pump motor. But, more important, they could present a safety hazard if the insulation were to become damaged or the connection end were to fall into the water.
2. **Make sure that the pump is plugged into a properly grounded electrical receptacle.** Use an Underwriters Laboratory listed circuit analyzer to test for proper installation of the circuit and ground. Any service to circuits or receptacles should be conducted by a qualified licensed electrician.
3. **Do not remove the ground pin from the plug under any circumstances.** If the ground pin is damaged, replace the power cord or plug before use.
4. All electrical installations must conform to the requirements of Electrical Code and all local codes.
5. **For Added Safety.** Pumping and other equipment with a 3-prong grounded plug must be connected to a 3-prong grounded receptacle. For added safety the receptacle may be protected with a ground-fault circuit interrupter. When a pump needs to be connected in a watertight junction box, the plug can be removed and spliced to the supply cable with proper grounding. For added safety this circuit may be protected by a ground-fault circuit interrupter. The complete installation must comply with the National Electrical Code and all applicable local codes and ordinances.
6. **Disconnect power before servicing the pump or motor by unplugging the unit from the outlet.**
7.  Do not touch the motor when operating and allow the motor to cool before touching.
8. Pump is built to handle clear water only; it is not designed to handle water containing sand, silt or other abrasives.
9.  Do not use to pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc. Do not use in flammable and/or explosive atmospheres.
10.  Do not use this product in hazardous environments or anywhere a spark could potentially ignite explosive gases.
11. Do not handle this product with wet hands or while standing in water or on a wet or damp surface.
12. Units are supplied with an automatically resetting thermal overload device and can restart without warning.
13.  Provide a means of pressure relief if the pump discharge can be shut off or obstructed. Pumps operating against a closed discharge can create very hot pumped liquid, which can cause burns.
14. "No Swimming" and/or warning signs should be posted per state and local codes. Please affix included warning label to power receptacle or junction box.
15. Do not ground to a gas supply line.
16. Protect the power cable from coming in contact with sharp objects, oil, grease hot surfaces or chemicals. **DO NOT** kink the power cable. If damaged, replace immediately.
17. Do not lift pump by power cord at any time. Attempting to lift or support the pump by the power cord can damage the cord and cord connections, and will void warranty. Always lift the pump by the lifting handle.
18. According to the state of California (Prop 65), this product contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.
19. **NEVER** leave the control box, fused disconnect switch or cover open (either partially or completely) when not being worked on by a competent electrician.
20. Never examine, make wiring changes or touch the motor before disconnecting the main electrical supply switch. The thermal device may have opened the electrical circuit. All motors should be equipped with a correctly fused disconnect switch to provide protection. Consult local Codes for proper fuse protection based on motor data chart.
21. Never run the pump dry. Running the pump dry can damage the seal, causing leakage, and compromise the electrical insulation. The pump is a submersible pump and relies on water to keep the motor cool, running the pump dry may also damage the motor.

REFER TO WARRANTY ON PAGE 2.

CAUTION

SEE BELOW FOR LIST OF CAUTIONS

1. Make certain that the power source conforms to the requirements of the equipment as stated on the product nameplates and wire motor for correct voltage. See motor nameplate.
2. Periodically inspect the pump for damage and perform routine maintenance as required.
3. The maximum temperature of the pumped liquid must not exceed 104°F(40°C).
4. Supply voltage must be within $\pm 10\%$ of nameplate voltage. Incorrect voltage can cause fire or seriously damage motor and voids warranty. If in doubt, consult a licensed electrician.
5. Always submerge the pump completely as partial submersion may lead to poor heat dissipation and damage the pump. Also direct expose to sun light may degrade the plastic material of the outer casing.

LIMITED WARRANTY

Manufacturer warrants, to the purchaser and subsequent owner during the warranty period, every new product to be free from defects in material and workmanship under normal use and service, when properly used and maintained, for a period of one year from date of purchase by the end user, or 18 months from date of original manufacture of the product, whichever comes first. Parts that fail within the warranty period, one year from date of purchase by the end user, or 18 months from the date of original manufacture of the product, whichever comes first, that inspections determine to be defective in material or workmanship, will be repaired, replaced or remanufactured at Manufacturer's option, provided however, that by so doing we will not be obligated to replace an entire assembly, the entire mechanism or the complete unit. No allowance will be made for shipping charges, damages, labor or other charges that may occur due to product failure, repair or replacement.

This warranty does not apply to and there shall be no warranty for any material or product that has been disassembled without prior approval of Manufacturer, subjected to misuse, misapplication, neglect, alteration, accident or uncontrolled act of nature; that has not been installed, operated or maintained in accordance with Manufacturer's installation instructions; that has been exposed to outside substances including but not limited to the following: sand, gravel, cement, mud,

tar, hydrocarbons, hydrocarbon derivatives (oil, gasoline, solvents, etc.), or other abrasive or corrosive substances, wash towels or any other abusive entity, etc. in all pumping applications. The warranty set out in the paragraph above is in lieu of all other warranties expressed or implied; and we do not authorize any representative or other person to assume for us any other liability in connection with our products. Contact authorized distributors to obtain any needed repair or replacement of part(s) or additional information pertaining to our warranty.

MANUFACTURER EXPRESSLY DISCLAIMS LIABILITY FOR SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES OR BREACH OF EXPRESSED OR IMPLIED WARRANTY; AND ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE AND OF MERCHANTABILITY SHALL BE LIMITED TO THE DURATION OF THE EXPRESSED WARRANTY.

Some jurisdictions do not allow limitations on the duration of an implied warranty, so the above limitation may not apply to you. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

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

In those instances where damages are incurred as a result of an alleged pump failure, the Homeowner must retain possession of the pump for investigation purposes.

SAFETY INSTRUCTIONS

Carefully read and follow all safety instructions in this manual and on pump. Keep safety labels in good condition. Replace missing or damaged safety labels.



This is a SAFETY ALERT SYMBOL. When you see this symbol on the pump or in the manual, look for one of the following signal words and be alert to the potential for personal injury or property damage.

DANGER

Warns of hazards that **WILL** cause serious personal injury, death or major property damage if ignored.

WARNING

Warns of hazards that **CAN** cause serious personal injury or death, if ignored.

CAUTION

Warns of hazards that **MAY** cause minor personal injury, product or property damage if ignored.

IMPORTANT: Indicates factors concerned with operation, installation, assembly or maintenance which could result in damage to the machine or equipment if ignored.

NOTE: Indicates special instructions which are important but are not related to hazards.

TROUBLE SHOOTING GUIDE



▲ WARNING ELECTRICAL PRECAUTIONS - Before servicing a pump, always shut off the main power breaker and then unplug the pump. Make sure you are not standing in water and are wearing insulated protective sole shoes. Under flooded conditions, contact your local electric company or a qualified licensed electrician for disconnecting electrical service prior to pump removal.

SYMPTOM	POSSIBLE CAUSE AND CORRECTIVE ACTION
Unit won't run.	Circuit breaker tripped. Reset circuit breaker. GFCI tripped. Reset GFCI.
GFCI trips.	Electrical storm can trip GFCI. Reset GFCI. Short in system. Disconnect power and check cord for damage.
Pump will not start or run.	Check fuse, low voltage, overload open, open or incorrect wiring, open switch, impeller or seal bound mechanically, defective capacitor or relay when used, motor or wiring shorted. Switch defective, damaged, or out of adjustment.
Motor overheats and trips overload or blows fuse.	Incorrect voltage, negative head (discharge open lower than normal) impeller or seal bound mechanically, defective capacitor or relay, motor shorted.
Pump operates but delivers little or no water.	Check strainer housing, discharge pipe, or if check valve is used vent hole must be clear. Discharge head exceeds pump capacity. Low or incorrect voltage. Incorrect motor rotation. Capacitor defective. Incoming water containing air or causing air to enter pumping chamber.
Drop in head and/or capacity after a period of use.	Increased pipe friction, clogged line or check valve. Abrasive material and adverse chemicals could possibly deteriorate impeller and pump housing. Check line. Remove base and inspect.

INSTALLATION

1. Install the pump on a hard level surface. Make sure that the pump cannot pick up rocks, mud and debris, etc. If necessary, put a block under the pump to raise it slightly. If used with a fountain jet, position the pump so that the fountain jet is above the surface of the water.
2. Protect the power cord from damage. Uncovered cords should be routinely inspected for damage or deterioration. DO NOT operate the pump if the cord is damaged.
3. If used in a garden pond, adjust the diverter valve to control the fountain spray height and flow over the waterfall. Do not restrict pump suction to adjust flows. Restricting the suction will starve the pump for water and can damage the pump.
4. If the pump is connected to a pond filter, adjust the diverter valve to provide adequate flow to the filter. Refer to the filter instruction manual to determine flow requirements of filter.
5. Post appropriate warning signs per local and state codes.
6. Inspect pump system for damage before installing in pond. Visually check that all bolts and screws are tight.
7. Before connecting the unit to the power receptacle, check to ensure there is no leakage to ground. This can be done by using an ohm meter and setting the scale to its highest setting (i.e. Rx100K). Connect one ohm meter lead to the unit power cord ground (round prong) and to one of the flat prongs. It should read infinite or at least 2 megohms. Repeat with the other prong.
8. Do Not Operate the pump on an Extension Cord. If no power is accessible at the pond, contract a licensed electrician to install the proper power supply in accordance with all applicable local codes and ordinances.
9. After installing the unit, checking ground and connecting power to the unit, the unit can be powered up.

INSTALLATION CHECK LIST

- Read installation instructions and warnings.
- Post appropriate warning signs.
- Check insulation resistance to ground.
- Power up unit.
- Test operation of GFCI.
- File instructions for future reference.

REQUIRED TOOLS & SUPPLIES

- Ohm meter to check insulation resistance to ground.

▲ CAUTION WINTER STORAGE

- Rinse unit with clean water to remove any dirt on unit.
- Check unit for any damage.
- Store unit in heated space in freezing climates.

Figure 1: Typical Installation

