

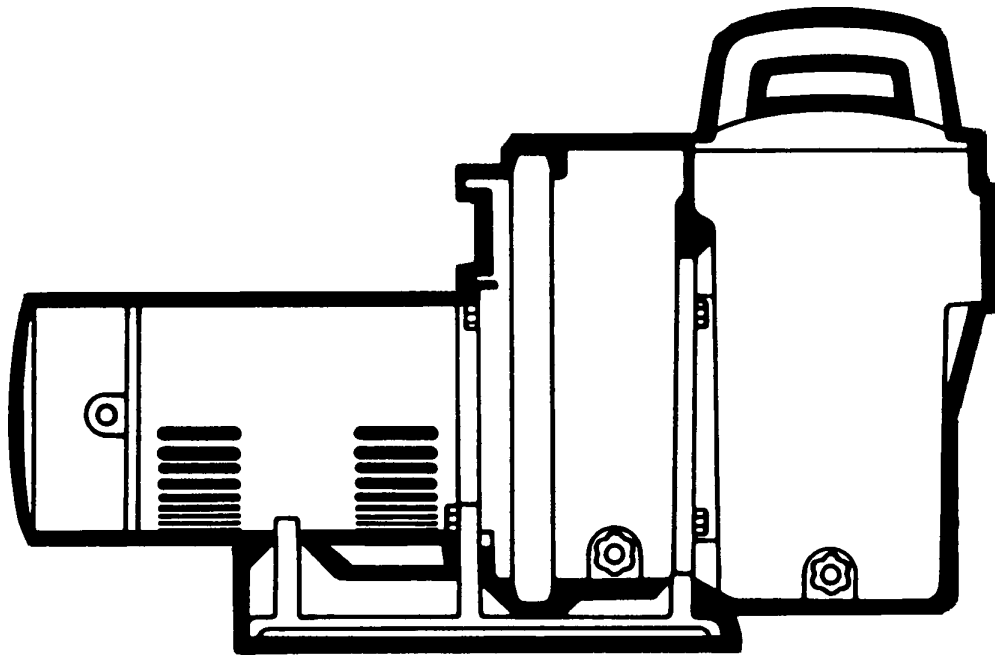


INSTALLATION MANUAL

SWIMMING POOL PUMPS

CONSUMER HOT-LINE: 1-800-942-3343 • MONDAY - FRIDAY • 7 AM to 5 PM

**EASTERN
STANDARD
TIME**



WARRANTY: PRODUCT DEFECTS COVERED 12 MONTHS FROM DATE OF PURCHASE OR 18 MONTHS FROM DATE OF MANUFACTURE, WHICHEVER COMES FIRST. RECEIPT AND PRODUCT DATE CODE REQUIRED FOR WARRANTY CLAIM.

WATER ACE PUMP COMPANY • ASHLAND, OHIO 44805-1969

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PUMPS FOR EVERY HOME POOL USE

- 3/4, 1, 1 1/2 HP models
- Adapters for 1 1/2" or 2" NPT piping included

- Strainer basket to protect pump and filter elements
- One year limited warranty

IMPORTANT SAFETY INSTRUCTIONS BEFORE INSTALLATION

Failure to follow these instructions may cause serious bodily injury and/or property damage.

 **WARNING** Warranty void if product modified, drilled, painted, or altered in any way; if used to pump hot water, or to pump liquids other than water (such as but not limited to chemicals, fertilizers, flammable liquids, herbicides, mud, tar, cement, wood chips); or otherwise abused.

Rules for Safe Installation and Operation


When installing and using this electrical equipment, basic safety precautions should always be followed, including the following:


1. READ THESE RULES AND INSTRUCTIONS CAREFULLY.

Failure to follow them could cause serious bodily injury and/or property damage.

2. (For all units) **WARNING.** To reduce the risk of injury, do not permit children to use this product.
3. **WARNING.** Risk of electric shock. Connect only to a circuit protected by a ground-fault circuit-interrupter (GFCI). Contact a qualified electrician if you cannot verify that the receptacle is protected by a GFCI.
4. Check National Electric Code and state and local codes before installing. You must comply with these rules.
5. Before installing pump, have the electrical circuit checked by an electrician to make sure it is properly grounded.
6. Before installing or servicing your pump, **BE CERTAIN pump power source is disconnected.**

CAUTION

 Pump must be primed! Make sure pump is full of water before running! Failure to do so will cause damage to mechanical seal, leakage and flooding!

 Never run pump against closed discharge valve! To do so can cause high temperatures, pump damage, personal injury and property damage!



WARNING Hazardous voltage! Can shock, burn or cause death. Read instructions before installing!



To avoid dangerous or fatal shock hazard turn off power and ground motor before connecting motor to electrical power supply!



Do not ground to a gas supply line!



Match supply voltage to nameplate voltage. Wrong voltage can cause fire or motor damage and voids warranty. If in doubt, consult a licensed electrician.



Pump may be **HOT** to touch. Use caution!

7. Make sure the line voltage and frequency of the electrical power supply agree with the motor name plate data.
8. Complete pump and piping system **must** be protected against below-freezing temperatures. Failure to do so could cause severe damage and will void the warranty.
9. **WARNING.** Do not pump chemicals or corrosive liquids with this pump. To do so will shorten the life of pump seals and moving parts, voiding the warranty.
10. After carefully removing your pump from the carton, make a visual inspection for any apparent shipping damage.
11. Do not use extension cords.
12. Do not pump gasoline or other flammable liquids.
13. If you need to close the valve on the discharge side of the pump, shut the valve slowly. Rapid closing of the valve could cause a water hammer effect and damage the pump.
14. **SAVE THESE INSTRUCTIONS.**

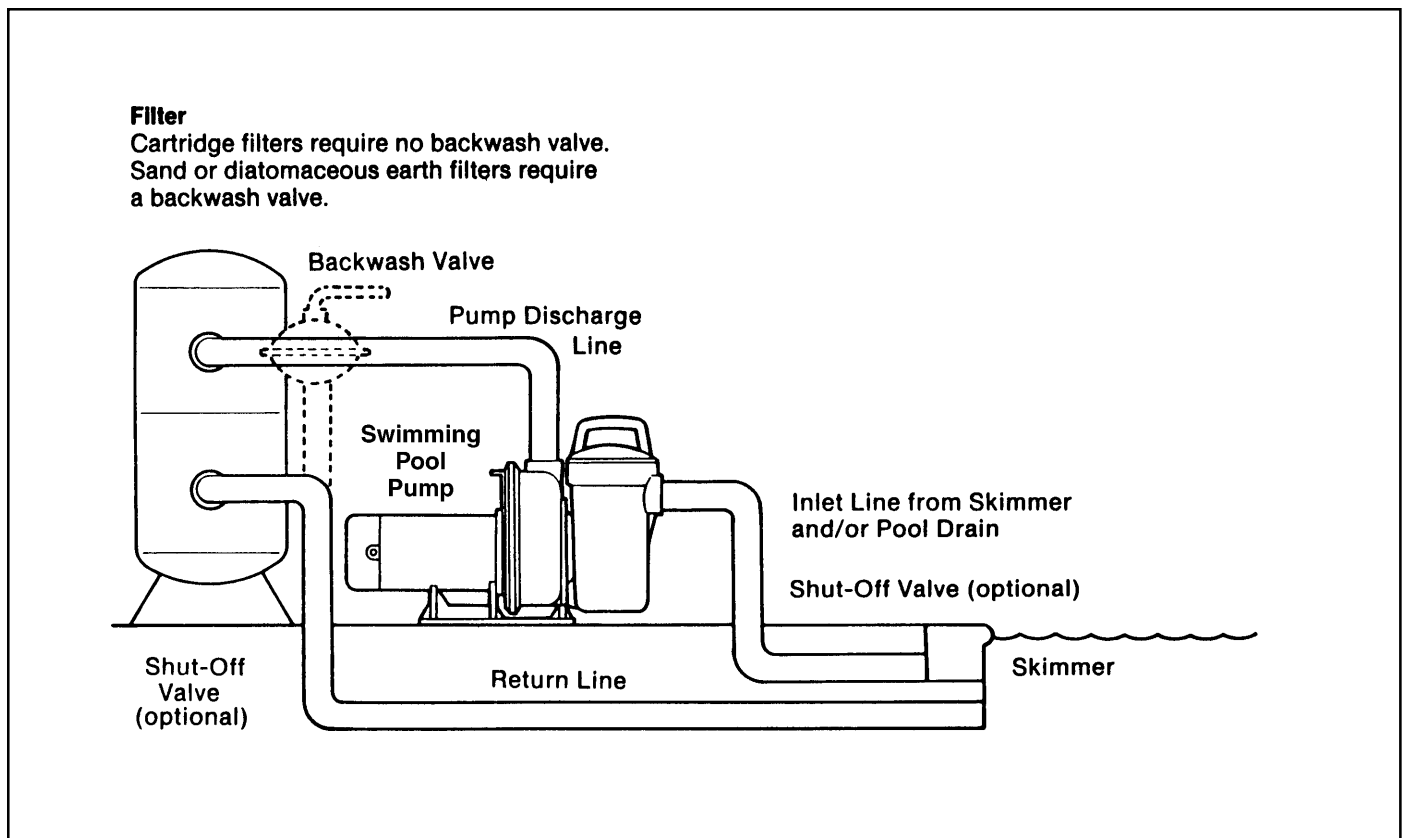
SWIMMING POOL PUMP INSTALLATION

General Tools and Materials Needed

- Electrical cable with ground wire
- Ground fault circuit breaker
- Rigid 1½" PVC pipe and fittings or reinforced flex hose and hose clamps
- Pump
- Filter
- Backwash valve (not required on cartridge filter)
- Shut-off valves
- Hacksaw with 24-tooth blade for cutting plastic pipe
- Knife or round file for smoothing inside of plastic pipe connections
- Screwdriver, pipe wrench, adjustable wrench
- PVC cleaner and adhesive
- Hose clamp fittings (only required for flex hose)

- STEP 1** Locate pump and filter on a solid level ground. Make sure pump is protected from the weather and pool splash. (Water should not come in contact with motor.)
- STEP 2** Connect the suction line from the pool skimmer and/or drain to the pump inlet. A shut-off valve is required on above ground pools.
- STEP 3** Connect the discharge line from the pump to the filter inlet.
- STEP 4** Connect the return line from the filter outlet to the swimming pool return inlet.
- STEP 5** Connect the electrical cable from the pump to a ground fault circuit breaker. Make sure power is off before connecting the wires. (SEE ELECTRICAL INFORMATION PAGE 4.)

TYPICAL INSTALLATION DRAWING



ELECTRICAL INFORMATION

Installation Instructions

Wiring to this pump must be installed and maintained in accordance with the National Electric Code, state and local codes. If more information is needed, call your local licensed electrician or your power company.

Grounding the Motor: Permanently ground the motor in accordance with the National Electric Code Article 250 and applicable local codes and ordinances. It is recommended that permanent ground connection be made to the unit using a conductor no smaller than No. 8 AWG (8.4mm²). This ground conductor should be connected from the accessible wire connector on the motor to all metal parts of the swimming pool structure and to all electrical equipment, metal conduit, and metal piping within 5 feet (1.5 m) of the inside walls of a swimming pool, when the motor is installed within 5 feet of the inside walls of the swimming pool. This permanent ground should be from a **metal** underground water pipe or a grounded lead in the service panel. A metal underground water pipe or well casing at least 10 feet long makes the best ground electrode.

If plastic pipe or insulated fittings are used, run the ground wire directly to the ground electrode furnished by the power company.

Caution: Do not ground to a gas supply line and do not connect to an electric power supply until unit is

permanently grounded. Connect the ground wire to the approved ground and then connect to the terminal provided.

Important: For your safety, be sure electrical circuit to pump is shut off (**disconnected**) before attempting to wire pump. Pump should be connected to a separate electrical circuit directly from main switch. A fuse box or circuit breaker must be used in this line (see fuse chart). Plugging into existing outlets can cause low voltage at motor, resulting in blown fuses, tripping of motor overload, or burned-out motor. All wiring must follow local codes.

Note: If ever in doubt, call a licensed electrician.

Motor Voltage: The pumps are wired for 230 volts, but may be converted to 115 volts by referring to instructions printed on motor. If motor is converted to 115 volts, have a qualified electrician check the entire electrical and power leads system to be sure they can handle the higher AMPS.

To Wire Pump: Make electrical connections with ground. First connect bare copper ground to ground screw on back of motor. Next make power connections. (See chart for wire size.)

Swimming Pool Wire & Fuse Selection Chart

PUMP MODEL	MOTOR HP	VOLTAGE	NAME PLATE AMPS	MAX. WIRE LENGTH USING AWG WIRE SIZE					FUSE OR CIRCUIT BREAKER
				14	12	10	8	6	
RSP7	3/4	115	11.8	100	160	250	385	600	15
RSP7	3/4	230	5.9	400	630	990	1545	2405	10
RSP10	1	115	14.4	—	128	200	310	485	20
RSP10	1	230	7.2	300	475	660	1030	1650	10
RSP15	1 1/2	115	20.8	—	—	142	222	345	25
RSP15	1 1/2	230	10.4	220	350	545	860	1325	15

MAINTENANCE AND SERVICE

Priming the Pump

To prime the pump, remove the lid from the strainer and fill the pump and basket with water. Turn cover counter-clockwise to remove. **CAUTION: Be sure pump has been shut off and pressure relieved before removing cover.**

When basket and pump are filled with water, replace

strainer lid. Lubricate "O" ring each time with petroleum jelly. Be sure "O" ring seal is in place before tightening cover. Turn clockwise to tighten.

The pump will now prime, with the priming time depending on the suction lift, and the horizontal distance of the suction piping.

POOL WINTERIZING

In areas where freezing temperatures occur, protect pump and pipes from freezing. When water freezes, it expands and damages the pump and piping.

WARNING. Do not use commonly available anti-freeze solutions.

Automotive anti-freeze solutions are commonly made up of ethylene glycol, which is highly poisonous and does not evaporate. Methyl alcohol is also highly poisonous, but will evaporate if given enough exposure to the atmosphere. Many windshield washer solutions are compounded with methylhydrate, which is very poisonous. All of these above-mentioned anti-freezes have a strong deteriorating effect on some plastic materials commonly found in pool pumps, valves, and filter components. Some plastics, such as those used in pump impellers will become crystalline and brittle when in contact with anti-freeze solutions or are exposed to the fumes. Other materials, such as clear trap lids can become milky in appearance, soften or lose rigidity when exposed to the fumes of anti-freeze compounds.

The recommended procedures for winterizing pool piping is as follows:

1. Use **low pressure air** flow to blow accumulated water from the piping system after the water level has been pumped down below all inlets to the pool. Drained inlet piping may be capped to prevent re-entry of water into the pipes.

2. There is one anti-freeze solution that is compatible with plastics and is non-toxic. Preliminary investigations show that **DOWFROST™**, a product of Dow Chemical Company is **safe and effective** for use in pools and all types of fresh water piping systems for winterizing, including solar systems. It is compounded of propylene glycol, and has a very low evaporation rate.

A solution of 40% Dowfrost and 60% water will protect pipes from bursting to -50° F. A unique property of Dowfrost is that it contracts as it approaches its freezing point, counteracting the expansion characteristics of water and preventing bursting of pipes.

Pump Service

CAUTION: Always turn power off and drain the pump before servicing. If pump is below the water level of the pool, close shut-off valve on both suction and discharge lines.

Step 1: Disconnect the power and remove drain plugs.

Step 2: Remove strainer lid; let drain.

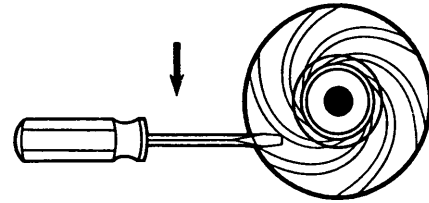
Step 3: Disconnect piping.

Step 4: Remove clamp by turning tee handle.

CAUTION: Be sure pump is drained and pressure has been released before removing clamp.

Step 5: Remove the case.

Step 6: Remove the impeller by turning counterclockwise. The best way to remove impeller is by inserting a screwdriver in the blade area and sharply hit screwdriver with a rubber hammer.



Step 7: The motor can be removed by unscrewing 4 bolts.

Step 8: Install new seal following instructions in seal repair package.

Step 9: Inspect "O" rings for knicks and cuts. If damaged, replace with new ones.

Step 10: Clean "O" ring seat area. Lubricate "O" rings with petroleum jelly.

Step 11: Attach motor to seal plate and base.

Step 12: Attach case to seal plate with clamp.

Step 13: Install pipe plugs.

Step 14: Connect piping.

Step 15: Fill pump with water.

Step 16: Replace strainer lid.

Step 17: Reconnect power.

POOL PUMP PARTS LIST

Ref. No.	Part No.	Description	Qty. Req'd.
1	25051A008	3/4 HP Motor, RSP7	1
1	25051A009	1 HP Motor, RSP10	1
1	25051A010	1 1/2 HP Motor, RSP15	1
2	05059A318	Slinger	1
*3	25053A000	Shaft Seal	1
4	19101A010	Cap Screw, 3/8" x 1"	6
5	25054B001	Impeller, RSP7	1
5	25054B002	Impeller, RSP10	1
5	25054B003	Impeller, RSP15	1
6	25059D000	Seal Plate	1
7	25060D000	Diffuser Housing	1

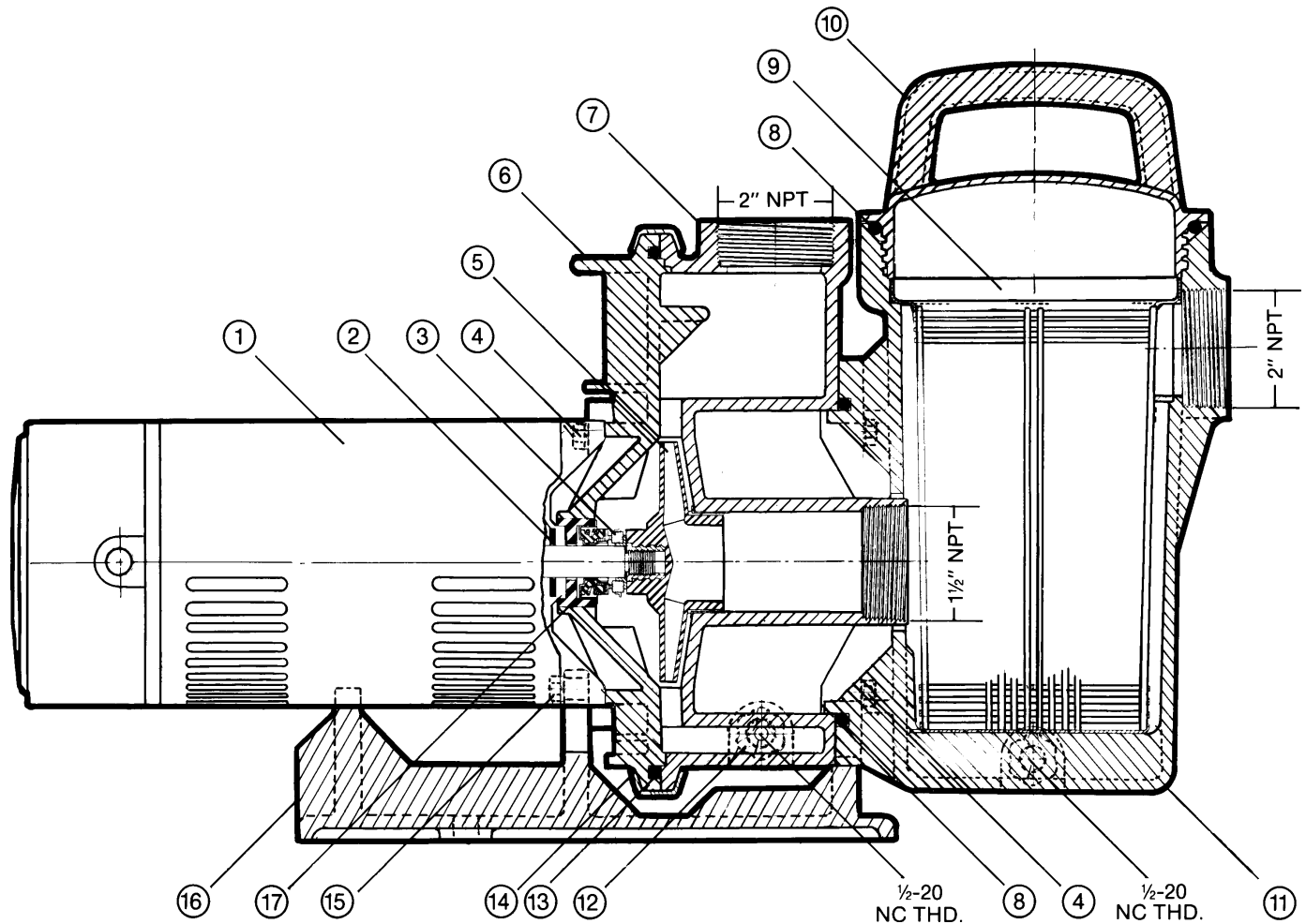
Ref. No.	Part No.	Description	Qty. Req'd.
8	05876A169	"O" Ring	2
9	25061C000	Strainer Basket, B.G.	1
10	25062C000	Lid, B.G.	1
11	25063D000	Strainer Housing, B.G.	1
12	25064A000	Drain Plug	2
13	05876A170	"O" Ring	1
14	25058C000	Clamp	1
15	19101A021	Cap Screw, 3/8" x 1 1/2"	2
16	25065C000	Foot, Mtg.	1
*17	25198A000	Seal Cup	1
—	25281A007	Seal Repair Kit**	1

B.G. = Below Ground

* If shaft seal (3) is replaced also replace seal cup (17).

** Seal Repair Kit (25281A007) contains seal, seal cup and all "O" rings.

Use only Water Ace Pump Co. approved components.



POOL PUMP TROUBLESHOOTING CHECKLIST

This information is for checking pool pump installations which are not operating properly. It is based on the premise that the installed system will consist of a swimming pool pump taking water from a pool and forcing it through a filter and back to the pool.

Warning: To guard against accidental personal injury, the electric power to the pump must be turned off when conducting the checking procedures outlined herein. There are obvious exceptions, however, and authorized service personnel should take necessary safeguards against the hazard of electrical shock.

PROBLEM	CHECKING PROCEDURE	
Pump will not prime	1. Stop motor, remove strainer lid, and fill case with water.	4. Check for plugged impeller.
	2. Make sure suction line has no leaks, and that it slopes gradually from pump to pool with no high or low spots.	5. Make sure the check valve is not sitting in sand or mud, and that it is not stuck shut.
	3. Make sure pump shaft turns clockwise when viewed from motor end opposite shaft.	
Pump delivers water for a period of time, then stops pumping	1. Check for plugged impeller.	3. Check for blocked suction line
	2. Check for a suction leak.	4. Check to see if impeller is rubbing.
Pump does not deliver rated capacity	1. Check for plugged impeller.	3. Check for a blocked suction line.
	2. Check for a suction leak.	4. Check to see if impeller is rubbing.
Motor overheats and shuts off (overload)	1. Make sure motor is properly wired for the correct voltage.	3. Make sure the impeller is not rubbing against the pump case.
	2. Wire size is too small. See selection chart on page 4.	
Motor fails or does not operate properly	1. If within warranty, return pump/motor unit to place of purchase (with proof of purchase) for exchange.	

LIMITED WARRANTY

WATER ACE PUMP CO. will repair or replace for the original user any portion of a new Water Ace product which proves defective due to materials or workmanship of WATER ACE PUMP CO. WATER ACE PUMP CO. shall possess the sole right to determine whether to repair or replace defective equipment, parts or components. THIS WARRANTY DOES NOT COVER DAMAGE DUE TO LIGHTNING OR OTHER CONDITIONS BEYOND THE CONTROL OF WATER ACE PUMP CO.

PUMPS: Warranted 12 months from date of purchase or 18 months from date of manufacture, whichever occurs first. Receipt and product date code required for warranty claim.

LABOR & COSTS: WATER ACE PUMP CO. shall IN NO EVENT be liable for the cost of field labor or other charges incurred by any customer in removing and/or reaffixing any WATER ACE PUMP product. part or component.

THIS WARRANTY WILL NOT APPLY: (a) to defects or malfunctions resulting from failure to properly install, operate, or maintain the unit in accordance with printed instructions provided; (b) to failures resulting from abuse, accident, or negligence; (c) to normal maintenance services and the parts used in connection with such service; (d) to units which are not installed in accordance with applicable local codes, ordinances, and good trade practices; (e) if the unit is moved from its original installation location; (f) if unit is used for purposes other than for what it was designed and manufactured.

PRODUCT IMPROVEMENTS: WATER ACE PUMP CO. reserves the right to change or improve its products or any component without obligation to provide such a change or improvement for units previously sold and/or shipped.

WARRANTY EXCLUSIONS: After the expiration of this warranty period, THERE WILL BE NO WARRANTIES INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE ON ANY SPECIFIC WATER ACE PUMP PRODUCT. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. No warranties or representations at any time made by any representative of WATER ACE PUMP CO. shall vary or expand the provisions hereof.

LIABILITY LIMITATION: IN NO EVENT SHALL WATER ACE PUMP CO. BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES RESULTING FROM OR RELATED IN ANY MANNER TO ANY WATER ACE PUMP PRODUCT OR PARTS. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. This Warranty gives you specific legal rights. You may have other rights which vary from state to state. In the absence of suitable proof of purchase date, the effective date of this warranty will be based upon the date of manufacture plus 180 days.

Direct all notices, etc. to: Product Warranty and Return Dept., WATER ACE PUMP CO., 1101 Myers Parkway, Ashland, Ohio 44805-1969.



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