



WMS1450 WMS2050 WMS3600

# Water Master Pump™

solids handling series

## Operating Manual & Specifications

Read entire instructions prior to installing the unit.



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# Before you start

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Savio Water Master Pumps™ are designed for use in ponds and water features. They are also useful for applications such as swimming pools, water storage basins, flooded basements, boats or cellars.

These pumps are not designed for waste water treatment purposes, flammable, corrosive, gaseous, explosive liquids (i.e. gasoline, fuel, dilutents), greases, oils or food waste - this will void the warranty. Savio Water Master Solids Handling Pumps™ can be employed for dirty water containing suspended solid particles with a maximum diameter up to 1 1/4". The temperature of the liquid should not exceed 95° F (35° C).

To prevent personal injury resulting from electrical shock, check the pump for possible damage prior to installation.

## **Important Safety Instructions**

Locate a GFCI (ground fault circuit interrupter) protected power source nearby. Typically a 4 outlet, 15 amp, 110v, grounded, single phase service is sufficient. Refer to your electrical equipment specifications or consult a qualified electrician to determine power demands for your system.



### **WARNING - ELECTRICAL SHOCK HAZARD**

This device contains electrical components that can pose significant risk of electrical shock. To guard against injury, observe basic safety precautions. Please read the following:

### **Precautions**

- ✓ ALWAYS unplug the power cord to the pump before handling. In case power cable is damaged, replacement must be performed by the manufacturer or by an authorized service center.
- ✓ To reduce the risk of electrocution, this device must be protected by a ground fault circuit interrupt switch (GFCI). If you do not have this switch contact a licensed electrician before installation.
- ✓ Before connecting the pump to a power source, **verify that the power source is the same voltage and frequency listed on the pump.**
- ✓ Never move or handle device by pulling on the power cord.
- ✓ Always disconnect the pump from power before any service work.
- ✓ Do not remove pump housing while the pump is in use.
- ✓ Product installation should comply with state and local electrical codes.
- ✓ Connect the pump to a separate isolated 15 amp circuit breaker or 15 amp fuse block. Using this product in a low voltage situation can damage the pump motor and other electrical components.
- ✓ Cutting off the ground pin on the power cord voids the pump warranty and could damage the pump.



# Pump Installation

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- 1) Install the pump in an upright position (handle upward).
- 2) With a 1 ¼" MIPT adapter and teflon tape, attach the PVC pipe (not included) to pump discharge outlet.
- 3) Place the discharge end of the PVC above water level to prevent accidental siphon draining of the pond when the pump is off.
- 4) Locate the power source away from water. Plug the pump into a ground fault circuit interrupt (GFCI) to prevent electric shock. Do not attempt to install or remove the pump with the power cord plugged in.
- 5) Keep the pump underwater when operating. Failure to operate the pump in water causes overheating and will shorten its service life.
- 6) Place the pump so the intake is kept free from blockage by mud or fibrous materials. Set the pump on a block elevated off the pond bottom. This prevents the pump from pulling in debris that has settled on pond bottom. Do not place on gravel.
- 7) To facilitate pump priming, force trapped air out of the pump housing by submerging it with the discharge outlet facing upward.
- 8) To start the pump, simply plug it in.

# Maintenance

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**Before performing any pump maintenance unplug the power cord from the electrical socket to ensure that it cannot restart on its own.**

Remove the pump housing from the pump body and clean it periodically or when a decrease in flow is noted.

- 1) Remove only the screws holding the lower pump housing to pump body.
- 2) Remove the pump housing from the pump body and carefully clean any debris off the impeller and pump housing.
- 3) Replace the pump housing, taking care to replace the o-ring in the o-groove on the pump body. If used to pump very dirty water (e.g. a flooded basement) the pump must be rinsed with fresh water and cleaned afterward.

## Overload protection

The pump is equipped with an thermal overload protector. If the motor overheats, the thermal protector automatically stops the pump. The cooling time is around 15-20 minutes. During this time search for the cause (low water level, blockage, impeller jammed) and eliminate it.

# Winterizing

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At the end of the season remove the pump from the pond and clean it as outlined above. Under no circumstances should the pump be left in frozen water.



# Troubleshooting



**Precautions** Before performing any troubleshooting operation, disconnect the pump from the power supply (by removing the plug from the socket).

Faults	Possible Causes	Remedies
Pump does not run.	a) Pump is not plugged in. b) Impeller jammed.	a) Connect power plug. b) Disconnect the power cord, disassemble lower housing and check if impeller is free to run.
The pump runs but does not deliver water.	a) Water level under the suction minimum. b) Air bubble in the pump. c) Discharge tube clogged or obstructed. d) Pump is not priming.	a) Stop the pump and check water level. b) Invert the pump to remove air bubble from housing. c) Disconnect the power, remove discharge tube and clean. d) Verify pump inlet is submerged in water.
Pump runs intermittently.	a) Thermal protection engaged. Possible issues: 1) Foreign object has jammed the impeller or blocked the intake. 2) The pump was used in hot water. 3) The pump ran dry.	a) Pump is too hot. Correct issue. Wait until the pump has cooled and resume operation.  1) Check inlet and discharge for clogs and clean. 2) Water temp. should not exceed 95° F (35° C). 3) Fully submerge pump during operation.

## Specifications

TYPE	WMS1450	WMS2050	WMS3600
Dimensions (h x w)	6" x 11 3/4"	6" x 12 1/2"	6" x 14"
Amps	1.6 - 2.3	2.3 - 3.0	4.7 - 6.0
Watts	180-250	240-350	500-650
Volts	115	115	115
Hertz	60	60	60
Max Flow	1450	2050	3600
Max Head	14'	16'	25'
Power Cord	16' length	16' length	16' length

## Warranty

SAVIO Engineering, Inc. provides a manufacturer's limited warranty of 1 year from original purchase date. Warranty is non-transferable. Within the warranty period SAVIO will repair materials with manufacturing deficiencies at their discretion. This warranty does not cover any faults caused by improper use, installation and handling of the device or as a result of wear and tear. SAVIO Engineering, Inc. does not assume liability for consequential damage caused by the failure of the SAVIO Water Master Pumps.™ Warranty is void if the product is not used in accordance with instructions. For warranty claims, please contact your dealership.



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