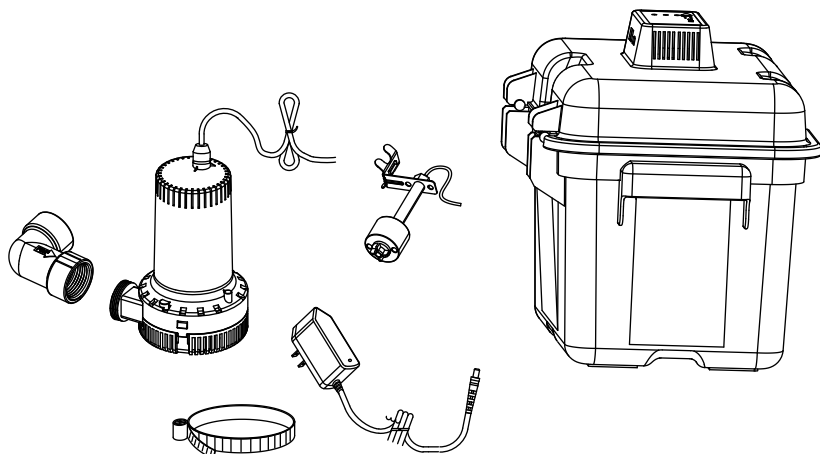


# MASTERCRAFT™/MC

## BACK UP SUMP PUMP



Model No. 062-3503-8

### **IMPORTANT:**

Please read this manual carefully before running this back up sump pump and save it for reference.

## **INSTRUCTION MANUAL**



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### NOTE:

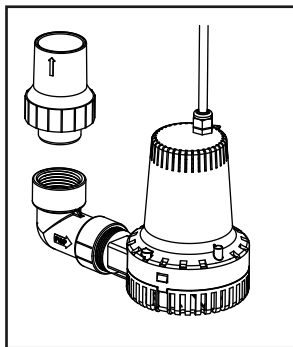
If any parts are missing or damaged, or if you have any questions, please call our toll-free helpline at 1-800-689-9928.



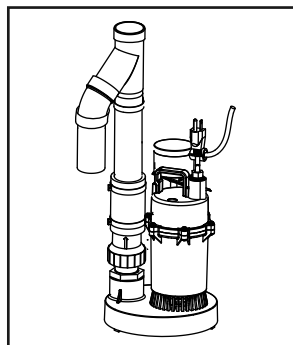
### SAVE THESE INSTRUCTIONS

This manual contains important safety and operating instructions.  
Read all instructions and follow them with use of this product.

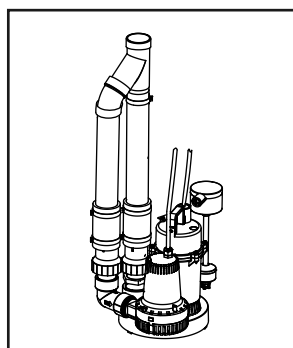
- 1 Try to assemble the primary (no glue). Wrap the thread of the check valve with non-stick tape and thread the check valve to the pump outlet. Then connect the check valve and the tee with rubber hose.



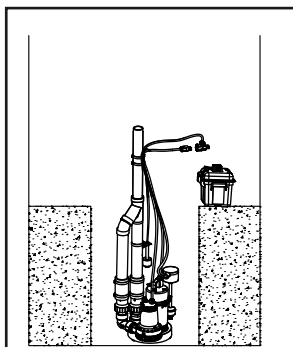
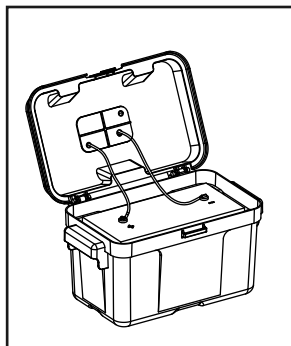
- 3 Try to assemble the backup pump (no glue). Connect the check valve of backup pump with rubber hose. Connect the upper end of the tee to the discharge plumbing. Recheck the alignment and glue the joints. After the glue has set, slide the hose clamps onto the rubber hose and tighten the clamps.



- 2 Wrap the thread of the discharge of the backup pump with non-stick tape. Thread a 90°, 1 1/4" (3.2 cm) FPT elbow onto the discharge of the backup pump. Wrap the thread of the check valve with non-stick tape and thread the check valve onto the 90° elbow.



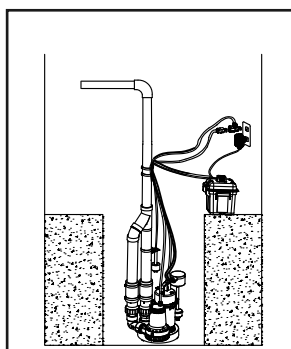
- 4** Place the battery (sold separately) into the control box. Connect the leads from controller: Red+ to battery Red+; Black- to battery Black-.  
Note: Be sure the battery box ventilation holes are unobstructed. Battery control box must be set up in a well-ventilated area. Smoking and open flames are prohibited.



- 5** Hook the backup pump switch clamp over the switch mounting bracket. Adjust the switch assembly location along the discharge pipe so that the backup pump float lower point is above the primary pump "ON" position. Tighten the mounting clamp of the backup pump switch.

- 6** To connect the balance pipes, plug the backup pump and the float switch wire male terminal into the female terminal on the control box. Plug the 12 V transformer outlet plug into the power connector marked "POWER" on the control box. Plug the transformer into a 115 V GFCI power outlet.

Please refer pg 14 to do necessary testing. After testing, plug the primary pump plug into the piggyback switch plug outlet, and then plug the switch plug into a 115 V GFCI outlet.



**TECHNICAL SPECIFICATIONS**

Temperature	32 to 77°F (0 to 25°C)
Impeller	Plastic
Solids handling	1/4" (6.3 mm) spherical
Discharge size	1 1/4" (3.2 cm) male national pipe thread (MNPT), 1 1/4" (3.2 cm) female national pipe thread (FNPT) with elbow
Seal	Lip seal
Cable entry	8' (2.55 m) quick-disconnect cord with male terminal
Upper bearing	Ball bearing
Lower bearing	Ball bearing
Power	12 V DC
Motor protection	Overload protection in lead
Construction material	Steel for motor house, plastic for volute and impeller
Maximum flow	2000 U.S. GPH (7571 L/hr)
Maximum head height	16' (4.9 m)

**MOTOR AND ELECTRICAL**

SKU number	062-3503-8
Volt	12 V DC
Cord size	18 AWG
Cord type	SJTW

**NOTE:**

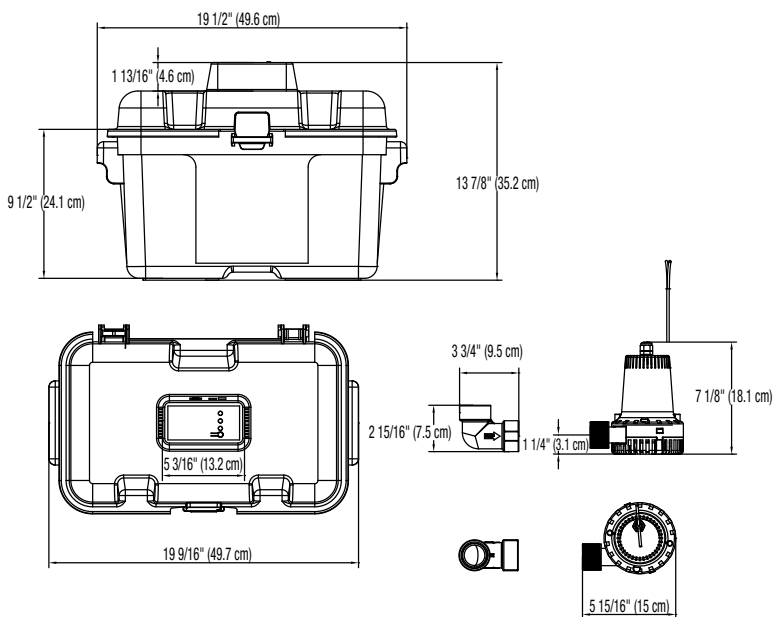
Do not reduce size of discharge pipe or hose below 1 1/4" (3.2 cm) diameter.  
If discharge is too small, pump will overheat and fail prematurely.  
This pump is designed for use as a residential sump only. Only pump  
water with this pump.

### PERFORMANCE CHART

Lift in feet/	0'	5'	10'	15'
metres	(0 m)	(1.5 m)	(3 m)	(4.6 m)
U.S. gallons/	2000	1500	1000	400
litres per hour	(7 571)	(5 678)	(3 785)	(1 514)

\*Friction loss in piping not included in measurement.

### DIMENSIONS



## SAFETY GUIDELINES

This manual contains information that relates to protecting personal safety and preventing equipment problems. It is very important to read this manual carefully and understand it thoroughly before using this product.

- These precautions are intended for the personal safety of the operator and others working with the operator. Failure to follow these instructions may result in a permanent loss of vision, serious personal or even fatal injury, property damage and/or tool damage. Please take the time to read and understand them.
- Wear safety glasses with side shields when operating the pump and verify that others in the work area are also wearing safety glasses. Safety glasses must conform to American National Standards Institute (ANSI Z87.1) and Canadian Standards Association (CSA Z94.3) requirements and must provide protection from flying particles from the front and the sides. Failure to comply may result in moderate injury.
- This pump is made of high-strength, corrosion-resistant materials. It will provide trouble-free service for a long time when properly installed, maintained, and used. However, inadequate electrical power to the pump, or dirt and debris may cause the pump to fail. Please carefully read the manual and follow the instructions regarding common pump problems and remedies.
- Mastercraft Canada is not responsible for losses, injury, or death resulting from a failure to observe these safety precautions, or the misuse or abuse of pumps or equipment.



### DANGER!

- Keep children away from the work area. Do not allow children to handle the pump.
- Follow all electrical and safety codes, particularly the Canadian Electrical Code, and local codes and ordinances.
- Disconnect the power supply to the pump, drain all water and release all pressure from the water system before servicing any pump component.
- Risk of fire or explosion: Do not pump flammable or explosive liquids such as oil, gasoline, kerosene, ethanol, etc. Do not use in the presence of flammable or explosive vapours. Using this pump with or near flammable liquids can cause an explosion or fire, resulting in property damage, serious personal injury and/or death.
- Risk of electric shock: Never remove the ground terminal on the three-pronged power plug of the pump as the ground terminal is designed for protection. Do not adjust any electrical appliance or product without disconnecting the power supply. Do not stand on wet or damp surface or in water when the pump is connected. Avoid handling the pump with wet hands.
- Risk of burns: Do not touch the motor housing during operation. The motor is designed to operate at high temperatures. Do not disassemble the motor housing.
- Ensure the electrical power source is adequate for the requirements of the pump.
- Extension cords may not deliver sufficient voltage to the pump motor. Extension cords present a life-threatening safety hazard if the insulation becomes damaged or the connection ends fall into water. The use of an extension cord to power this pump is not permitted.
- Battery acid is corrosive. Do not spill on skin, clothing, or battery charger. Wear eye and head protection when working with battery. Connect and disconnect DC output terminals only after removing the charger from the AC outlet. Never allow the DC terminals to touch each other.
- To avoid danger of fire or explosion, keep sparks and flame (pilot light) away from battery.

### CAUTION!

- Know the pump and its applications, limitations, and potential hazards.
- Secure the discharge line before starting the pump. An unsecured discharge line will whip, possibly causing personal injury and/or property damage.
- Secure the pump to a solid base. This will aid in keeping the pump in a vertical orientation. This is critical in keeping the pump operating at maximum efficiency. It will also help prevent the pump from clogging resulting in premature failure.
- Periodically inspect the pump and system components. Disconnect the pump from the power supply before inspecting.
- Never run the pump dry, as doing so may damage the mechanical seal and void the warranty.



### UNPACKING

- Upon receiving the pump, it should be inspected for damage or shortages. If damage has occurred, file a claim immediately with the carrier that delivered the pump. If the manual is removed from the packaging, do not lose or misplace.

### STORAGE

- **Short Term**—Pumps are manufactured for efficient performance following short, inoperative periods in storage. For best results, pumps can be retained in storage, as factory assembled, in a dry atmosphere with constant temperatures for up to six (6) months.
- **Long Term**—For storage of six (6) months, to twenty-four (24) months, the units should be stored in a temperature-controlled area: a roofed-over, walled enclosure that provides protection from the elements (rain, snow, wind-blown, dust, etc.), and where the temperature can be maintained between 4 and 40°C (40 and 120°F). If extended high humidity is expected to be a problem, all exposed parts should be inspected before storage and all surfaces that have the paint scratched, damaged, or worn should be recoated with a water-based, air-dry enamel paint. All surfaces should then be sprayed with a rust-inhibiting oil.
- Pump should be stored in its original shipping container. On initial start up, rotate impeller by hand to assure seal and impeller rotate freely.

### INSTALLATION

#### DISCHARGE

- Discharge piping should be as short as possible. A check valve is recommended for each pump being used. The check valve is used to prevent backflow into the sump. Excessive backflow can cause flooding and/or damage to the pump.

### ELECTRICAL CONNECTIONS

- Pump comes with float switch.
- **Power Cable**—The cord assembly mounted to the pump must not be modified in any way. Any splice between the pump and the control panel must be made in accordance with all applicable electric codes. It is recommended that a junction box, if used, be mounted outside the sump or be of at least NEMA 4 construction if located within the wet wall. Do not use the power cable to lift pump.



#### CAUTION!

- Do not lift the pump by the power cord.
- Keep battery charger and battery box off of the floor and in a dry, cool, well-ventilated area.
- If a carbon monoxide (CO) sensor is installed, it must be at least 15' (4.6 m) away from battery charger in order to avoid nuisance CO alarms. Please refer to your CO detector's installation guidelines for more information.

#### WARNING!

- Protect the electrical cord from sharp objects, hot surfaces, oil, and chemicals. Avoid kinking the cord. Do not use damaged or worn cords.
- Failure to comply with the instructions and designed operation of this unit may void the warranty. Attempting to use a damaged pump can result in property damage, serious personal injury and/or death.

**SAFETY GUIDELINES****WIRE SIZE**

- Consult a qualified electrician for proper wire size.

**PRE-OPERATION: CHECK VOLTAGE AND PHASE**

- Before operating pump, check to make sure that the voltage and phase information stamped on the pump's identification plate matches the available power.

**IDENTIFICATION PLATE**

- Note the numbers on the pump's identification plate and record at the end of the manual for future reference.

**INSULATION TEST**

- Before the pump is put into service, an insulation (megger) test should be performed on it. The ohm values as well as the volts and amps should be recorded.

**PUMP-DOWN TEST**

- After the pump has been properly wired and lowered into the basin, sump, or lift station, it is advisable to check the system by filling with liquid and allowing the pump to operate through its pumping cycle. The time needed to empty the system, or pump down time, should be recorded.

**MAINTENANCE**

- No lubrication or other maintenance is required.

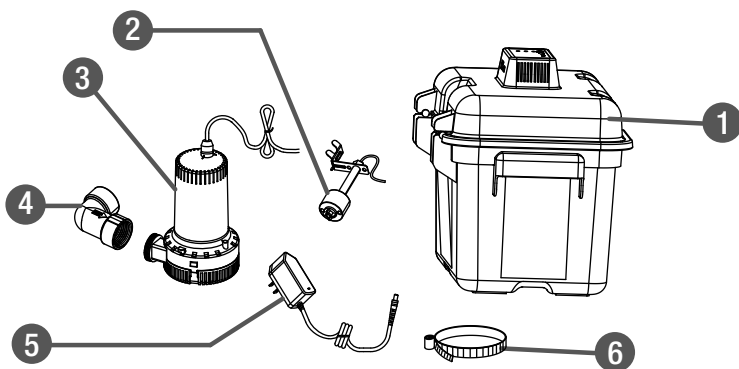
**CAUTION!**

- Risk of electric shock. Do not remove cord and/or strain relief. Do not connect conduit to pump.

## PARTS LIST

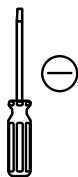
No.	Description	Qty.
1	Control box	1
2	Float switch	1
3	Backup pump	1

No.	Description	Qty.
4	Elbow	1
5	Transformer	1
6	Hose clamp	1

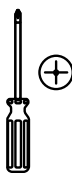


**APPLICATION**

- The battery back-up sump pump is not a substitute for your primary sump pump. It is designed to temporarily back up your primary sump pump when the main sump pump fails or during a power outage.
- This unit is not designed as a waterfall or fountain pump, or for applications involving salt water or brine. Use with waterfalls, fountains, salt water or brine will void warranty.
- Do not use where water recirculates.
- Not designed for use as a swimming pool drainer.

**TOOLS REQUIRED**

Flathead screwdriver



Cross-head screwdriver



Channel lock pliers



Pipe wrench



Hacksaw



Cable ties



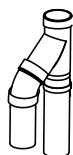
Safety goggles



Tape measure

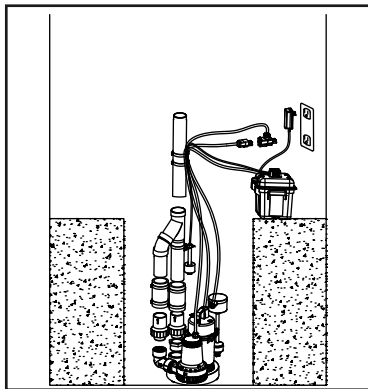
**MATERIALS REQUIRED (NOT INCLUDED)**Threaded adaptor  
(pipe to pump)1 1/4" (3.2 cm) or  
1 1/2" (3.8 cm)  
ABS or PVC pipe

Thread tape

1 1/4" (3.2 cm) or  
1 1/2" (3.8 cm)  
check valveABS or PVC cement  
(to match the pipe)1 1/4" (3.2 cm) or  
1 1/2" (3.8 cm)  
90° elbow1 1/4" (3.2 cm) or  
1 1/2" (3.8 cm)  
"Y" pipeFlexible plastic  
pipe/clamps

### INSTALLATION

- Verify that the existing primary sump pump is in good working order. If the primary pump is questionable, replace with the same or a higher HP pump. It is better for the primary pump to have a vertical float switch or electrical switch. A tethered float switch takes more sump pit space and might interfere with the backup DC pump.
- Manually operate your primary sump pump and pump out the water in your sump pit. Do not let the pump run dry. This will damage the pump.
- Disconnect the primary sump pump power source before attempting to install. Never handle a pump with wet hands or when standing on wet or damp surface or in water. Fatal electrical shock could occur.
- Remove any silt or accumulated debris from the sump pit and surrounding area.



### Battery backup pump installation

There are two ways to install the battery backup pumps. If the sump pit base is bigger than 18" (46 cm) in diameter, enough space exists to install both primary pump and the DC pump and the DC pump can be installed on the same base as the primary pump or a little bit higher than the primary pump. Otherwise, install the DC pump above the primary sump pump.

To install:

1. Remove the hose coupling or cut the main discharge pipe.
2. Separate the primary sump pump from the discharge pipe.
3. Lift the primary sump pump and the attached discharge pipe out of the sump pit.
4. Wrap the thread of the discharge of the DC pump with non-stick tape. Thread a 90°, 1 1/4" (3.2 cm) FPT elbow onto the discharge of the DC pump.
5. Wrap the thread of the check valve with non-stick tape and thread the check valve onto the 90° elbow.
6. Install a check valve onto the primary pump discharge pipe. Install the rubber hoses onto the check valves.
7. Try to assemble the system (no glue). Insert a piece of PVC pipe into the tee and insert another piece of PVC pipe into the 1 1/4" (3.2 cm) adaptor. Plug the rubber hose onto the PVC pipe. Connect the tee to the primary sump and verify the assembly in the sump pit. If necessary, adjust the PVC pipe length in the rubber hose so that nothing interferes with the primary pump and switches.
8. Recheck the alignment and glue all the joints.
9. After the glue has set, slide the hose clamps onto the rubber hose and tighten the clamps.

### NOTE:

Install the battery backup system when the primary sump pump isn't needed. Read the instructions and prepare all supplies before starting.

If your check valve is a rubber check valve, you need a 1 1/4" (3.2 cm) nipple, a 1 1/4" (3.2 cm) FPT x 1 1/4" (3.2 cm) slip adaptor, and a piece of 1 1/4" (3.2 cm) PVC pipe to connect with the rubber check valve.

- Hook the DC pump switch clamp over the switch mounting bracket. Adjust the switch assembly location along the discharge pipe so that the DC pump float lower point is above the primary pump "ON" position. Tighten the mounting clamp of the DC pump switch.

## BATTERY AND CONTROL BOX WIRING AND SET-UP

- Plug the pump wire male terminal into the female terminal "PUMP" on the control box.
- Plug the float switch male terminal into the female terminal "FLOAT" on the control box.
- Plug the 12 V transformer outlet plug into the power connector "POWER" on the control box. Plug the transformer into a 115 V GFCI power outlet. The LED indicators on the control box screen should be on.
- Follow the on-screen instructions. Test the pump operation by lifting and holding the float. The "Pump Status" LED will continuously light and the buzzer will beep steadily. The pump should start. If the pump doesn't run, check all the connections and reconnect them as necessary.

## BATTERY BACKUP SYSTEM TESTING

To verify the system is operational, press "RESET" button 1–4 seconds. The system will complete a self-testing diagnostic. The DC pump will run for 3 seconds.

Green light is on: The system is normal.















Yellow light quickly flashes and alarm sounds: Battery disconnected or DC fuse blown. Connect the battery or replace the fuse.

Yellow light slowly flashes and alarm sounds: Power off or power adaptor failed.

Yellow light is on: Battery recharging.

Red light is on and the alarm sounds: Battery backup pump working.

Red light slowly flashes and alarm sounds: Pump wire connection problems or pump failed.

	Red Light On and sound alarm: Battery backup pump working.	
	Red Light slow flash and sound alarm: Pump wire connection problems or pump failed.	
	Yellow Light On: Battery recharging.	
	Yellow Light slow flash and sound alarm: Power off or power adaptor failed.	
	Yellow Light quick flash and sound alarm: Battery disconnected or DC Fuse broken.	
	Green Light On: The system is normal.	
<hr/>		
	LED is ON Continuously	
	LED is Flashing (Slow)	
	LED is Flashing (Fast)	
<b>RESET</b> →		

## NOTE:

Press the "RESET" button, hold for 4–8 seconds then release. The buzzer should stop sounding. After the system returns to normal status, the sound alarms will automatically reset. Be sure the battery box ventilation holes are unobstructed. Battery control box must be set up in a well-ventilated area. Smoking and open flames are prohibited. The shaft seal depends on water for lubrication. Do not operate the pump unless it is submerged in water as the seal may be damaged if allowed to run dry.

## OPERATION

1. To verify primary pump operation, fill the sump pit with enough water to trigger operation. The primary sump pump will start, pump out the water then stop.
2. Unplug the primary pump power cord plug from the power supply outlet.
3. To verify DC pump operation, refill the sump pit with water until the DC pump float switch moves to the upper end. The DC pump should start and pump out the water. If it does not operate, please check all the wire connections.

## SPECIFICATIONS

- Water-cooled, high-efficiency motor for extended operation during power outages.
- Use a deep-cycle marine battery for maximum performance.
- High-quality surface finish and corrosion-resistant thermoplastic structure for long life with minimum maintenance.
- Reliable reed-sensor water detection for automatic operation.
- Includes controller, charger, float switch, pump, and battery box.
- Easy installation without any major plumbing changes.

### NOTE:

Pump must be filled with water before operation. Running the pump dry will cause damage to the shaft seal.

## CARE AND MAINTENANCE

To prevent serious injury from accidental operation, unplug the pump from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.

To prevent serious injury from pump failure, do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

## BATTERY MAINTENANCE

To protect the battery case from chipping and gouging, do not let the battery sit on a concrete floor. Install the battery on a shelf or protective pad such as plywood. Always install the battery in a dry location that is protected from flooding.

Follow the battery manufacturer's recommendations for maintenance and safe use of the battery.



### WARNING!

- Procedures not specifically explained in this manual must be performed only by a qualified technician.
- An acid-filled standard lead-acid battery contains sulfuric acid. Avoid contact with skin, eyes or clothing.



## TROUBLESHOOTING GUIDE CHECKLIST

**Do not disassemble the motor housing. This pump has NO repairable internal parts, and disassembly may cause an oil leak or dangerous electrical wiring conditions. DO NOT lift up the pump by power cord**

Problem	Possible Causes	Corrective Action
Pump will not start or run.	Wire connection issues. Battery issue. Switch stuck.	Check all the wiring connections. Check for a low or defective battery. Check that the float switch is free to move up and down.
Motor hums but pump doesn't pump water.	Battery issue.	Check for a low or defective battery.
Flow rate is too low.	Water leaks internally.  The discharge pipe length and/or height exceeds the capacity of the pump. Low battery. Positive and negative wires connected incorrectly.	Make sure a check valve is installed between primary pump discharge and the DC pump tee. Replace the DC pump.  Check for a low or defective battery. Reverse the positive and negative wire connections.
Pump cycles frequently.	The check valve located between the discharge of the primary pump and the battery backup tee is not installed or is not working properly.	Install check valve or replace check valve.

This Mastercraft product is guaranteed for a period of **three (3) years** from the date of original retail purchase, against defects in materials and workmanship.

Subject to the conditions and limitations described below, this product, if returned to us with proof of purchase within the stated warranty period and if covered under this warranty, will be repaired or replaced (with the same model, or one of equal value or specification), at our option. We will bear the cost of any repair or replacement and any costs of labour relating thereto.

**These warranties are subject to the following conditions and limitations:**

- a. a bill of sale verifying the purchase and purchase date must be provided;
- b. this warranty will not apply to any product or part thereof which is worn or broken or which has become inoperative due to abuse, misuse, accidental damage, neglect or lack of proper installation, operation or maintenance (as outlined in the applicable owner's manual or operating instructions) or which is being used for industrial, professional, commercial or rental purposes;
- c. this warranty will not apply to normal wear and tear or to expendable parts or accessories that may be supplied with the product which are expected to become inoperative or unusable after a reasonable period of use;
- d. this warranty will not apply to routine maintenance and consumable items such as, but not limited to, fuel, lubricants, vacuum bags, blades, belts, sandpaper, bits, fluids, tune-ups or adjustments;
- e. this warranty will not apply where damage is caused by repairs made or attempted by others ((i.e., persons not authorized by the manufacturer);
- f. this warranty will not apply to any product that was sold to the original purchaser as a reconditioned or refurbished product (unless otherwise specified in writing);
- g. this warranty will not apply to any product or part thereof if any part from another manufacturer is installed therein or any repairs or alterations have been made or attempted by unauthorized persons;
- h. this warranty will not apply to normal deterioration of the exterior finish, such as, but not limited to, scratches, dents, paint chips, or to any corrosion or discolouring by heat, abrasive and chemical cleaners; and
- i. this warranty will not apply to component parts sold by and identified as the product of another company, which shall be covered under the product manufacturer's warranty, if any.

**Additional Limitations**

This warranty applies only to the original purchaser and may not be transferred. Neither the retailer nor the manufacturer shall be liable for any other expense, loss or damage, including, without limitation, any indirect, incidental, consequential or exemplary damages arising in connection with the sale, use or inability to use this product.

**Notice to Consumer**

This warranty gives you specific legal rights, and you may have other rights, which may vary from province to province. The provisions contained in this warranty are not intended to limit, modify, take away from, disclaim or exclude any statutory warranties set forth in any applicable provincial or federal legislation.

Made in China

Imported for  
Mastercraft Canada Toronto, Canada M4S 2B8