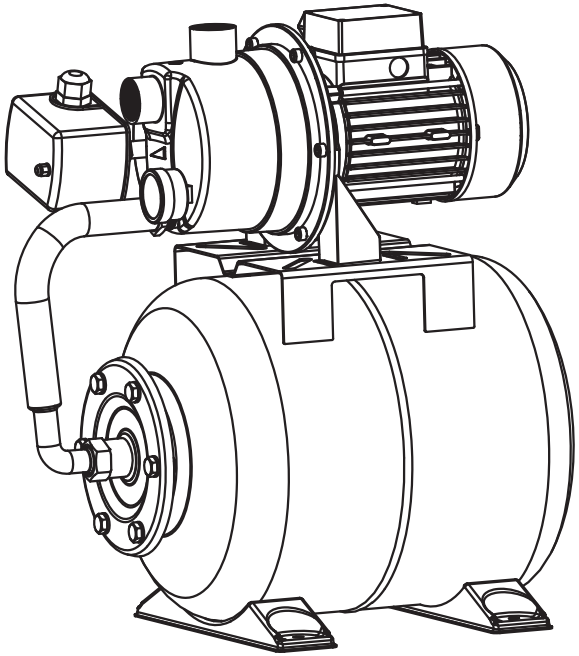
model no. 062-3428-8

MASTERCRAFT™/MC

SHALLOW WELL JET PUMP

with 6 U.S. Gallon (22 L) Tank



IMPORTANT:
Please read this manual carefully before running this 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.

TECHNICAL SPECIFICATIONS

Model Number	062-3428-8
Electrical Rating	120 V / 60 Hz / 5 A
Inlet / Outlet Diameter	1" (2.5 cm) NPT
Maximum Flow	950 U.S. GPH (3596 L/h)
Maximum Suction Lift	26' (7.9 m)
Maximum Delivery Height	100' (30.5 m)
Air Bladder Pressure	23 PSI
Start Pressure	20 PSI
Stop Pressure	35 PSI
Power Cord Length	7' (2.1 m)
Discharge Size	1" (2.5 cm) national pipe thread (NPT)
Suction Size	1 1/4" (3.2 cm) national pipe thread (NPT)

PERFORMANCE

0' (0 m)	20' (6.1 m)	40' (12 m)	60' (18.2 m)	80' (24.3 m)	100' (30.5 m)	Max. Head
950 GPH (3596 L/h)	825 GPH (3123 L/h)	650 GPH (2460 L/h)	475 GPH (1798 L/h)	250 GPH (946 L/h)	20 GPH (75.7 L/h)	100' (30.5 m)

NOT FOR POTABLE WATER

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.

Before start-up, note the following: The pump can be connected to any shock-proof plug which has been installed according to regulations. The plug must have a supply voltage of 120 V~, 60 Hz.

Fluid Type: The pump is designed for use with water with a maximum temperature of 77°F (25°C). Do not use the pump for other fluids, especially not fuels, cleaning fluids, or other chemical products.

CAUTION:
This pump has been evaluated for use with water only.

IMPORTANT INSTRUCTIONS

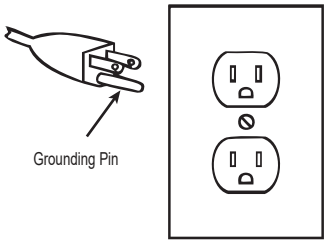
For your own safety – before starting to run the pump, please have the following items checked by an expert:

1. Risk of electric shock – This pump is supplied with a grounding conductor and grounding-type attachment plug. To reduce the risk of electric shock, connect only to a properly grounded, grounding-type receptacle.
2. Risk of electric shock – This pump has not been investigated for use in swimming pool areas.
3. The electrical connections must be protected from moisture.
4. If there is danger of flooding, the electrical connections must be taken to higher ground.
5. Circulation of caustic fluids, as well as the circulation of abrasive materials, must be avoided at all costs.
6. The pump must be protected from frost.
7. The pump must be protected from running dry.
8. Access by children should also be prevented with appropriate measures.
9. WARNING: Handling the power cord on this product will expose you to lead, a chemical known to cause cancer, and birth defects or other reproductive harm. Wash hands after handling.
10. The warnings, precautions, 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.

GROUNDING INSTRUCTIONS

To prevent electric shock and death from incorrect grounding wire connection, read and follow these instructions:

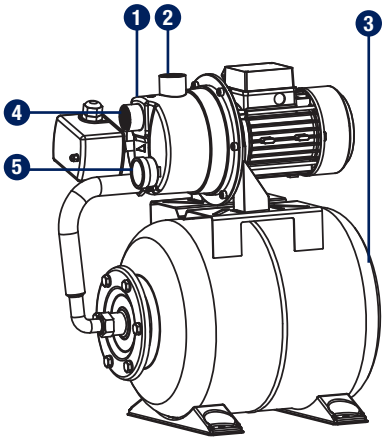
Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the power cord plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the power cord or plug is damaged. If damaged, have it repaired by a service facility before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.



125 V~ 3-Prong Plug and Outlet
(for up to 125 V~ and up to 15 A)

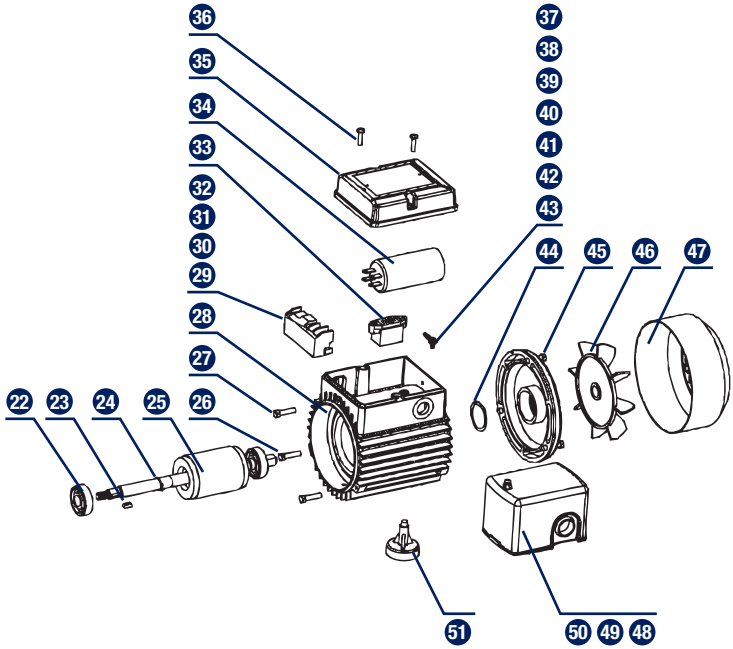
1. Tools marked with “Grounding Required” have a three-prong cord and three-wire grounding plug. The plug must be connected to a properly grounded outlet. If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock.
2. The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool’s grounding system and must never be attached to an electrically “live” terminal.
3. The tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in the preceding illustration.
4. This pump is intended for use on a circuit that has an outlet that looks like the one illustrated above. The pump has a grounding plug that looks like the plug illustrated above.
5. The outlet must be properly installed and grounded in accordance with all codes and ordinances.
6. Do not use extension cords with this pump.
7. Do not use an adaptor to connect this pump to a different outlet.

KEY PARTS DIAGRAM



No.	Description
1	Priming inlet
2	Discharge
3	Air valve (hidden)
4	Intake
5	Pressure gauge

PARTS LIST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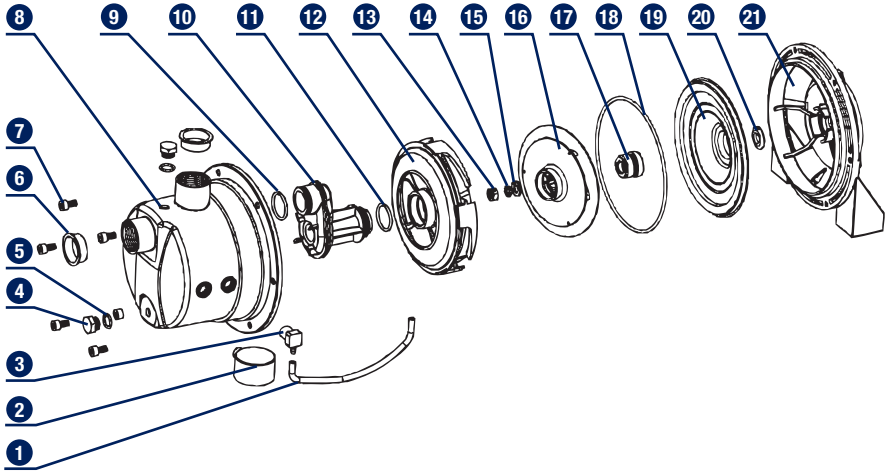
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PARTS LIST

No.	Description	Qty.
1	Flexible pipe	1
2	Pressure gauge	1
3	Pipe connection	1
4	Screw	2
5	O-ring	2
6	Dust cover	2
7	Screw	6
8	Pump body	1
9	O-ring	1
10	Injector	1
11	O-ring	1
12	Diffuser	1
13	Hexangular nut	1
14	Spring washer	1
15	Washer	1
16	Impeller	1
17	Mechanical seal	1
18	O-ring	1
19	Support cover	1
20	Waterproof ring	1
21	Motor flange	1
22	Bearing	2
23	Shaft key	1
24	Circlip for shaft	3
25	Rotor	1

No.	Description	Qty.
26	Screw	2
27	Screw	4
28	Stator	1
29	Terminal	1
30	Insulated flexible pipe	
31	Insert spring	3
32	Screw	2
33	Double voltage transfer switch	1
34	Capacitor	1
35	Terminal cover	1
36	Screw	2
37	Screw	1
38	Spring washer	1
39	Serrated lock washer	1
40	Terminal lug	3
41	Terminal lug	1
42	Heat shrinkable tube	0.18
43	Connector	4
44	Wave spring	1
45	End plate	1
46	Fan	1
47	Fan cover	1
48	Pressure switch	1
49	Nut	1
50	Cable	1
51	Foot	1

INSTALLATION INSTRUCTIONS

The well motor pump must be installed in a stationary position with a fixed pipeline and a steady water supply.

Please Note!

1. Remove the screw from the front of the unit to connect the power to the heater.
2. The pump must be installed with an automatic float switch (not included) to prevent running dry.

Power Supply

1. The pump is equipped with a shock-proof plug according to regulations. The pump is designed to be connected to 120 V~, 60 Hz safety socket.
2. Make sure that the socket is sufficiently secured and is in excellent condition.
3. When the plug is inserted into the socket the pump will be on standby.

WARNING:
If the power cord or plug is damaged, do not use the pump. The power cord or plug may only be repaired by a certified electrician.

Installation Considerations

This pump is designed for use as a well pump.

WARNING!

TO PREVENT SERIOUS INJURY FROM ELECTRIC SHOCK:

- Install indoors or in weather-proof well house only.
- This pump is non-submersible.
- Do not plug in the power cord when wet or standing on damp or wet ground.
- Do not plug in the power cord until instructed to do so.

NOTE:

a. ONLY pump clean water.

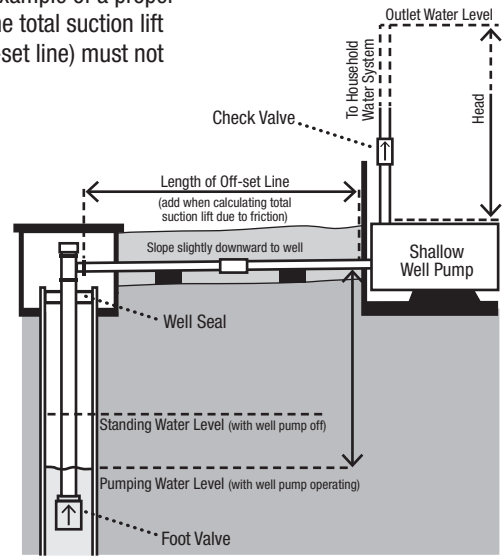
b. Additional components (such as valves and pipes) may be required for installation, but not included.

c. Installation requires skilled workmanship and compliance with local building codes. If you are not confident in your ability to properly and safely install this pump, have a qualified technician perform the installation.

d. The water to be pumped must be clean and must be free of sand and grit which will damage the pump and void the warranty.

1. The illustration below shows an example of a proper shallow well pump installation. The total suction lift (vertical well lift and length of off-set line) must not exceed the maximum suction lift.

   NOTE:
   - **This pump is intended for shallow well application only and is not intended to be used as a booster pump.**
   - **For optimal performance, install the pump as close to the well head as possible**



Pump Setup Example

2. Install a foot valve at the bottom of the suction pipe. The foot valve must be under the pumping water level (the level that the water falls to when the pump operates).
3. Install a sterile well seal at the top of the suction pipe to keep the well clean. Protect from rust inside a frost-proof enclosure.
4. Intake and discharge pipes must be at least 1" (2.5 cm) in diameter.
5. Lay an off-set line from the well to the structure the pump will be installed in. The off-set line should slope slightly towards the well as shown in the above illustration. Systems with longer off-set lines should use larger diameter pipe to improve efficiency.
6. Install the pump on a rigid, level, dry platform. This platform must provide a solid, level surface that is capable of supporting the weight of the pump and attached piping filled with water. Do not allow water to contact the pump's housing.
7. Keep the head, the height that the pump discharge must push water before discharge, to a minimum. The vertical well lift and off-set line length added together must be smaller than the maximum suction lift, and the head must be smaller than the maximum delivery height, to have flow at output. Effective flow decreases to 0 GPH as the delivery height reaches its maximum.
8. For your protection, the power outlet used should have a Ground Fault Circuit Interrupter (GFCI). Have it installed by a qualified electrician. Keep power line away from water.
9. The inlet and discharge lines should not be wedged or stressed in a way that puts strain on the pump. Do not support the pump with the inlet or discharge lines.

CAUTION:
DO NOT insert fittings into the intake hole farther than 1/2" (12.7 mm); this can DAMAGE the pump, diminish pump functions, and/or STOP water flow.

OPERATING INSTRUCTIONS

1. The compression has a rubber bladder inside. This bladder must be pumped up to 23 PSI of air at all times. Use a bicycle pump (not included) to inflate the bladder. On the end of the compression tank, opposite the inlet, is an air valve located under a cover. Remove the cover over the air valve and periodically monitor this air valve with an air pressure gauge to ensure that the rubber bladder maintains the required air pressure.
2. Make sure the intake pipe is fully submerged before continuing.
3. Before starting the pump for the first time, prime it as follows:
   a. Fill the suction pipe and pump body through the priming inlet.
   b. Close the inlet after verifying that there are no leaks.
   c. Open the spigots, faucets and/or taps on the delivery pipe so that air can be release from the suction cycle.
4. This is a self-starting pump that uses a pressure switch. Once the power cord is connected, the pump can start at any time. Do not handle or perform maintenance on the pump if the power cord is plugged in,
5. After reading these instructions, consider the following points before starting the pump:
   a. Verify that the delivery pipe is properly connected.
   b. Verify that the electrical connection is 120 V~, 60 Hz.
   c. Verify that the electrical socket is in good condition.
   d. Verify that water and moisture cannot get near the power supply socket.
   e. Verify that the pump is installed so as to prevent running dry.
6. To begin pumping, plug in the power cord. When the line is pressurized, the pump will go onto standby mode until the pressure falls below its starting pressure.

MAINTENANCE

1. Clean the inlet screen on the intake port regularly to remove accumulated debris.
2. Wipe the pump clean with a soft, damp cloth dampened with soapy water. Do not use solvents. Do not get the electrical components wet.
3. Drain water from pump before storage by disconnecting the water lines and turning the pump upside down. If storing the pump for a long time, store it in a dry location, and apply a light layer of oil to the metal parts prior to storage to inhibit rust. Do not expose to freezing temperatures.
4. After storage, check the impeller to make sure it turns easily and is not oxidized.

WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION: Unplug the pump from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.

TROUBLESHOOTING

Problem	Possible Cause	Corrective Action
The pump won't start.	1. No power. 2. Pressure switch disconnected. 3. Thermal protection activated. 4. Blocked impeller.	1. Check connections, and breaker/fuse. 2. Check gauge. 3. Allow pump to cool. 4. Free the impeller.
The pump operates but it won't discharge water.	1. Pump not primed. 2. Lift height exceeded. 3. Inlet tube not submerged. 4. Air in suction pipe. 5. Inlet screen clogged.	1. Prime pump. 2. Reduce lift height. 3. Submerge the inlet. 4. Check pipe and seals. 5. Clean screen.
Only a low volume of water flows.	1. Inlet pipe is too small. 2. Liquid is too dirty. 3. Lifting height exceeded. 4. Tank's rubber bladder under-inflated. 5. Piping corroded, causing friction.	1. Increase pipe diameter. 2. Clean screen frequently. 3. Reduce lifting height. 4. Inflate to 23 PSI. 5. Replace piping with plastic where possible.
Motor overheats often.	1. Extension cord too long or wire size too small. 2. Pump cycling too often.	1. Eliminate use of extension cord or use shorter/heavier gauge cord. 2. Cut-in and cut-out pressure may be set too close together. Have the pressure switch adjusted by a qualified technician.
Pump/motor cycles rapidly.	Cut in and cut out pressure may be set too closely.	Have the pressure switch adjusted by a qualified technician.
Tank bladder will not hold pressure.	1. Air inlet valve is leaking. 2. Bladder is broken.	1. Check air tank for leaks using soapy water and replace bladder if needed. 2. Replace bladder.
Water pumps intermittently.	Water level is being drawn below foot valve.	Lower foot valve.
Pump will not hold prime.	1. Foot/check valve not installed in suction line. 2. Foot/check valve leaks water back to well.	1. Install foot and check valve in suction line. 2. Replace foot/check valve.
Water is full of bubbles at outlet.	1. Pumping bubbles temporarily as air is purged after initial setup. 2. Leak in suction side of pump system. 3. Well is gaseous. 4. Water level below suction inlet of foot valve.	1. Temporary self-remedying issue. 2. Check for and fix leaks. 3. Install a sleeve in the well. 4. Lower suction line into water and re-prime. If water is lower than the maximum suction lift height, a deep well pump may be needed.

- Follow all safety precautions whenever diagnosing or servicing the pump.
- Disconnect power supply before service.
- Do not disassemble the pump or motor as this will damage the water seals.
- All repairs should be performed by a qualified technician.

Problem	Possible Cause	Corrective Action
Motor runs, but water is not pumping.	1. Improper priming. 2. Air leakage. 3. Vertical lift too high. 4. Water level below suction inlet of foot valve. 5. Frozen pipes. 6. Foot valve in dirt or sand. 7. Foot/check valve clogged. 8. Pressure switch is set too low.	1. Prime the pump by pouring clean water into the priming inlet. 2. Check all pipes and joints in the suction line for air leakage using soapy water. 3. Reduce vertical lift to within specifications. See specifications on page 4. 4. Lower suction line into water and re-prime. If water is deeper than the maximum suction lift height, a deep well pump may be needed. 5. Thaw the pipes. Bury pipes below freeze line and/or insulate pipes. 6. Raise foot valve to clean water level. 7. Clean or replace foot/check valve. 8. Have the pressure switch adjusted by qualified technician (20 PSI start; 35 PSI stop).
Pump does not shut-off.	1. Pressure switch contacts welded together. 2. Fixture (toilet, faucet, etc.) open or leaking. 3. Impeller is clogged. 4. Tank bladder pressure is too low. 5. Pipeline leakage. 6. Foot/check valve leaks water back to well.	1. Have the pressure switch replaced by a qualified technician. 2. Close or repair fixture. 3. Clean impeller. 4. Inflate to 23 PSI. 5. Replace piping. 6. Replace foot/check valve.

WARRANTY

PLEASE DO NOT ATTEMPT TO OPEN OR REPAIR THE PUMP YOURSELF. DOING SO COULD VOID THE WARRANTY AND CAUSE DAMAGE OR PERSONAL INJURY.

This Mastercraft product carries a three (3) year LIMITED warranty against defects in workmanship and materials. This product is not guaranteed against wear or breakage due to misuse and/or abuse.

Made in China
Imported by
Mastercraft Canada Toronto, Canada M4S 2B8