Safety Warnings

Thank you for purchasing your Ion Technologies Pump. To help ensure years of trouble-free operation, please read the following manual carefully.

CAUTION/ WARNING: Read these safety warnings first before installing, servicing, or operating any pump.

DANGER: Keep pump equipment out of the reach of children! Failure to follow the directions given could cause serious risk to individuals or objects.

Before Installation
This manual contains important information for the safe use of this product. Read this manual completely and follow the instructions carefully. Reasonable care and safe methods relating to the installation and operation of this product should be practiced. Check local codes and requirements before installation.

WARNING: Risk Bronze/brass fitted pumps may contain lead levels higher than considered safe for potable water systems. Government agencies have determined that leaded copper alloys should not be used in potable water applications.

WARNING: Installation, wiring, and junction connections must be in accordance with the National Electric Code and all applicable state and local codes. Requirements may vary depending on usage and location.

WARNING: Installation and servicing is to be conducted by qualified personnel only.

DANGER: Rotating machinery. Amputation or severe lacerations can result. Keep clear of suction and discharge openings. DO NOT insert fingers into pump with power connected.

WARNING: Always wear eye protection when working on pumps. Do not wear loose clothing that may become entangled in moving parts.

DANGER: Pumps build up heat and pressure during operation. Allow time for pumps to cool before handling or servicing.

DANGER: Hazardous Voltage can shock, burn, or cause death. This pump is not intended for use in swimming pools or water installations where human contact with pumped fluid is possible.

DANGER: Risk of electrical shock. To reduce risk of electrical shock, always disconnect pump from power source before handling. Lock out power & tag.

WARNING: Do Not use these pumps in water over 145°F. Do not exceed manufactures recommended maximum performance, as this could cause the motor to overheat.

CAUTION: Make sure lifting handles are securely fastened each time before lifting.

DANGER: Do not lift, carry or hang pump by the electrical cables. Damage to the electrical cables can cause shock, burns or death. Never handle connected power cords with wet hands. Use appropriate lifting device.

WARNING: Sump and sewage pumps often handle materials which could cause illness or disease. Wear adequate protective clothing when working on a used pump or piping. Never enter a basin after it has been used.

DANGER: Failure to permanently ground the pump, motor and controls before connecting to power can cause shock, burns or death.

DANGER: These pumps are NOT to be installed in locations classified as hazardous in accordance with the National Electric Code, ANSI/ NFPA 70.

WARNING: Do not introduce into any sewer, waste disposal unit or toilet: Seafood Shells, Aquarium Gravel, Cat Litter, Plastic Objects, Sanitary Napkins or Tampons, Diapers, Rags, Disposable Wipes or Cloth, Medications, Flammable Material, Oil or Grease, Strong Chemicals, Gasoline.

- Operation against a closed discharge valve will cause premature bearing and seal failure on any pump.
- Any wiring of pumps should be performed by a qualified electrician.
- Cable should be protected at all times to avoid punctures, cuts, bruises, and abrasions —inspect frequently.
- Never handle connected power cords with wet hands.
- Never let cords or plugs lie in water outside the sump pit.
- These pumps are offered in a three phase and single phase wiring configuration. Voltages will vary according to the application and can be seen in the tables in this manual.

Do not throw away or lose this manual. Keep it in a safe place so that you may refer to it often for the continued safe operation of the product.

Installation Requirements

- This pump is provided with an on/off float switch for automatic operation.
- Care should be taken to prevent the pump from running in a dry sump.
- The pump must be placed on a hard level surface. Never place the pump directly on clay or gravel surfaces.
- The pump can be installed with ABS, PVC, polyethylene or galvanized steel pipe. Proper adapters are required to connect plastic pipe to the pump.
- Install a union in the discharge line, just above the sump pit to allow for easy removal of the pump for cleaning or repair.
- A check valve is used, drill a relief hole 3/16” in diameter in the discharge pipe. This hole should be located below the floor line between the pump discharge and the check valve. Unless such a relief hole is provided, the pump could “air lock” and will not pump water even though it will run.
- A union and shut-off valve can follow the check valve to allow periodic cleaning of the check valve or removal of the pump.
- The remainder of the discharge line should be as short as possible with the minimum of turns to minimize friction head loss. Do not restrict the discharge to sizes below 2”.

Materials Required (Not Included)

- 1-1/2” Discharge pipe
- Thread sealant tape
- 1-1/2” Check valve
- 1-1/2” Elbow
- Optional: 1-1/2” Union, 1-1/2” Pipe nipple and 1-1/2” shut off valve

NOTE: The consumer/installer should purchase either a pre-threaded 1-1/2" MNPT pipe (or unthreaded pipe and pipe threader) or a 1-1/2" or 1-1/4" adapter (1-1/2" MNPT x 1-1/2" OD slip fit or 1-1/4" MNPT x 1-1/4" OD slip fit)

Service and Repair

Important: Pump should be thoroughly cleaned of trash and deposits before starting disassembly operations.

WARNING: Disconnect all power and control wires to motor at control panel before starting disassembly operation. Never rely on opening circuit breaker only.

CAUTION: Operating pump builds up heat and pressure; allow time for pump to cool to room temperature.

Pump Installation

Step 1: Connecting the discharge pipe to the pump.
Wrap the threads of the 1-1/2" discharge pipe with thread sealant tape. Next attach the discharge pipe to the discharge of the pump.

Step 2: Place the pump in basin.
Place the pump on a hard surface inside basin.

Step 3: Connecting the check valve.
Connect the discharge pipe to the check valve, another section of vertical pipe, elbow, and optional to connect union and shut-off valve after elbow

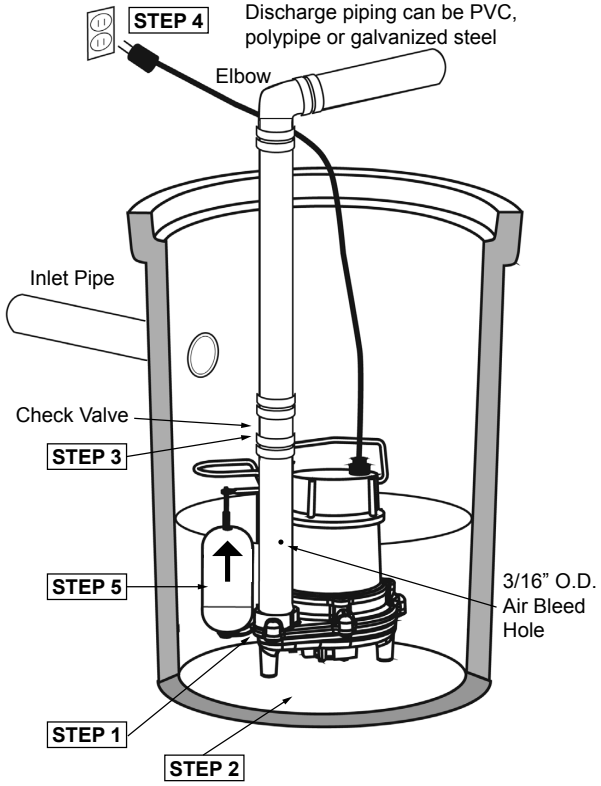
OPERATION
Step 4: Connecting Power
Plug the power cord into a 115V GFCI power outlet. Allow pump to operate through several on-off cycles by adding water to basin.

Step 5: Operating the pump
When the float switch moves up over the top of the pump the pump begins to operate. When the water lowers to a certain level, the float switch will turn the pump off.

Your pump warranty is void..

If...power cord has been cut.

If...pump has been used to pump mud, cement, tar, abrasives or chemicals.



If...pump has been used for pumping hot water (above 120°F).

If...cord tag has been removed.

Servicing should be performed only by an authorized service center.

WARNING: Always disconnect the pump from power source before handling or making any adjustments. Always wear rubber boots when there is water on the floor and you must unplug the pump or make any adjustments.

Note: Automatic thermal overload protects the sealed-in-oil motor. Running dry may overheat the motor and activate the overload protector until the unit cools.

Troubleshooting

Pump runs but does not pump liquid

1. Pump impeller may be air locked
2. Vent Hole Clogged
3. Clogged inlet

4. Discharge gate valve may be closed
5. Discharge gate valve may be clogged or have a broken clapper
6. Discharge head may be too high

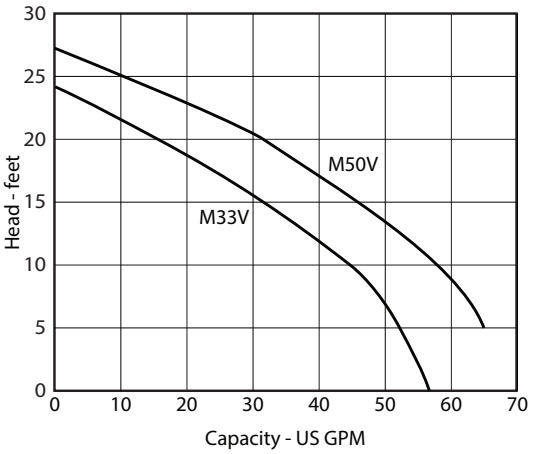
Thermal overload tips

1. Impeller may be clogged with foreign objects

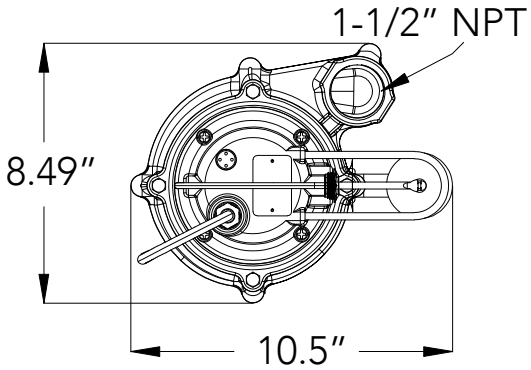
Circuit breaker tips

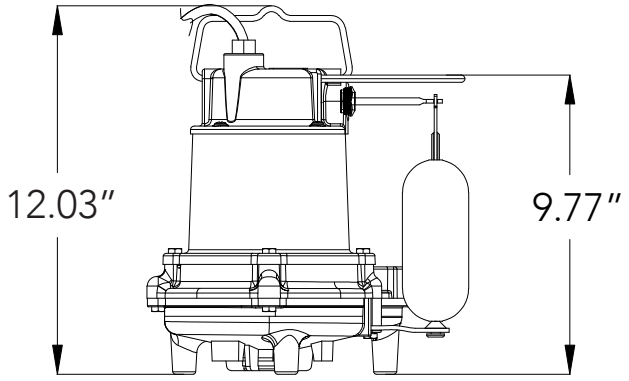
1. Excessive load possibly caused by a short in the motor
2. If this condition happens after an electrical storm, motor or control box may be damaged by lightning .

Performance



Specifications





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Ion|StormPro 1 Year/ 18 Months Residential Warranty

1. Coverage and Term. Metropolitan Industries, Inc. ("**Metropolitan**") warrants to the original purchaser (the "Buyer") of each Ion|StormPro product (the "product"), that any part thereof which proves to be defective in material or workmanship for a period of one year from date of installation or 18 months from date of manufacture, which ever comes first, will be replaced at no charge with a new or remanufactured part, F.O.B. factory. Buyer shall be responsible for all freight charges and all costs of field labor or other charges incurred in the removal and/or reinstallation of any product, part or component thereof.

2. Exclusions. **THE WARRANTY IS SUBJECT TO THE FOLLOWING CONDITIONS AND EXCLUSIONS:**

(a) The Warranty excludes products or workmanship which becomes defective as a result of: (i) earthquake, fire, storms, the elements or any other acts of God; (ii) normal wear and tear from use; (iii) accident, misuse, abuse or neglect; (iv) modifications made by Buyer or any third party, other than **Metropolitan**; and (v) Buyer's failure to properly install, maintain, service and/or operate the product under normal conditions and according to manufacturer's instructions.

(b) **Metropolitan** shall not be responsible for, and the Warranty shall not cover, extended damage which occurs because of Buyer's failure to notify **Metropolitan** promptly in writing of apparent defects.

(c) Any part or component designated as manufactured by anyone other than **Metropolitan** shall be covered only by the express warranty of the manufacturer thereof.

(d) The Warranty shall lapse upon Buyer's failure to fully comply with the terms and conditions of its contract with **Metropolitan**, including Buyer's failure to pay the purchase price for the product or any portion thereof. Buyer's subsequent compliance with the terms and conditions of any such contract, will not cause the term of the Warranty to extend beyond the time period set forth above.

(e) No actions taken by **Metropolitan** to correct a defect in a product shall extend the Warranty beyond the period set forth above. **Metropolitan** shall not be obligated to remedy any defect, where otherwise required pursuant to the Warranty unless and until Buyer notifies **Metropolitan** in writing of the defect and then only if such notification is made prior to the expiration of the period set forth above.

3. Process of Claims and Repairs. **Metropolitan** agrees that if the product or any part or component thereof shall fail to conform to the terms of this Warranty, **Metropolitan** shall replace such nonconforming product, part or component at the original point of delivery and furnish instruction for its disposition. Any transportation charges involved in such disposition and all costs of field labor or other charges incurred in the removal and/or reinstallation of any product, part or component thereof shall be the responsibility of Buyer.

4. Limitation on Liability. Notwithstanding any provision to the contrary, **Metropolitan's** entire liability under this Warranty shall not in the aggregate exceed, and Buyer's exclusive and sole remedies are, to the extent permitted by law, shall be to secure replacement of the defective product. **UNDER NO CIRCUMSTANCES SHALL METROPOLITAN BE LIABLE UNDER THE WARRANTY FOR ANY INDIRECT, PUNITIVE, SPECIAL, EXEMPLARY, CONSEQUENTIAL OR INCIDENTAL DAMAGES (INCLUDING LOST PROFITS, REVENUE, USE OR ECONOMIC ADVANTAGE).**

5. Express Waiver of Any Other Warranties. **THE EXPRESS WARRANTY SET FORTH IN THIS WRITTEN WARRANTY IS THE ONLY WARRANTY MADE BY METROPOLITAN, OR ANY OTHER PARTY, IN CONNECTION WITH ANY PRODUCT PURCHASED FROM METROPOLITAN. NEITHER METROPOLITAN, NOR ANY OTHER PARTY, MAKES ANY OTHER EXPRESS OR IMPLIED WARRANTY WHICH IS NOT SET FORTH HEREIN, AND METROPOLITAN HEREBY DISCLAIMS AND BUYER HEREBY WAIVES ALL IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.**

6. Not Transferable. The Warranty may not be transferred and shall be void on the sale or other transfer of the product.

7. Products and Warranty Subject to Change. **Metropolitan** reserves the right to make revisions to its products and their specifications, and to revise this Warranty and related information without notice.