

Notice to installer: instructions must remain with installation.

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Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.

Register your
Zoeller Pump Company
Product on our website:
<http://reg.zoellerpumps.com/>



MAIL TO: P.O. BOX 16347 • Louisville, KY 40256-0347
SHIP TO: 3649 Cane Run Road • Louisville, KY 40211-1961
TEL: (502) 778-2731 • 1 (800) 928-PUMP • FAX: (502) 774-3624

Visit our website:
zoellerpumps.com

FM3291
1220
Supersedes
New

DATE INSTALLED:

MODEL NUMBER:

INSTALLATION INSTRUCTIONS

912/915 24 x 24 Preassembled Sewage Systems

PREINSTALLATION CHECKLIST - ALL INSTALLATIONS

1. Inspect all materials. Occasionally, products are damaged during shipment. If the unit is damaged, contact your dealer before using. DO NOT remove the test plugs from the pump.
2. Carefully read the literature provided to familiarize yourself with specific details regarding installation and use. These materials should be retained for future reference.



WARNING

SEE BELOW FOR
LIST OF WARNINGS

1. To reduce the risk of electrical shock, a properly grounded receptacle or control box must be installed in accordance with the governing codes. Never remove ground pin from plug.
2. Make certain that the ground fault interrupter protected receptacle or control box is within the reach of the pump's power supply cord. DO NOT USE AN EXTENSION CORD. Extension cords that are too long or too light do not deliver sufficient voltage to the pump motor, and they could present a safety hazard if the insulation were to become damaged or the connection end were to fall into a damp or wet area.
3. Make sure the pump's electrical supply circuit is equipped with fuses or circuit breakers of proper capacity. A separate branch circuit is recommended, sized according to the local electrical codes for the current shown on the pump name plate.
4. **Testing for ground.** As a safety measure, each electrical outlet should be checked for ground using a circuit analyzer which will indicate if the power, neutral and ground wires are correctly connected to your outlet. If they are not, call a qualified, licensed electrician.
5. **FOR YOUR PROTECTION, ALWAYS DISCONNECT PUMP FROM ITS POWER SOURCE BEFORE HANDLING.** If pump is wired direct, de-energize the circuit at the control box. Wear insulated protective shoes and do not stand in water. Pumps equipped with a 3-prong ground plug are designed to help protect against electrical shock. DO NOT, UNDER ANY CIRCUMSTANCES, REMOVE THE GROUND PIN.
6. Installation and servicing of the pump's electrical circuits and hardware should only be performed by a qualified, licensed electrician.
7. **Risk of electrical shock.** Do not remove power supply cord and strain relief or connect conduit directly to the pump.
8. Pump contains oil which becomes pressurized and hot when operating. Allow 2-1/2 hours after disconnecting before attempting service.
9. Pump is not intended for potable water due to possible contamination by oil contained in the pump.
10. **Risk of electric shock.** These pumps have not been investigated for use in swimming pools and marine areas.
11. **Prop65 Warning for California residents:**



WARNING: Cancer and Reproductive Harm-
www.P65Warning.ca.gov.



CAUTION

SEE BELOW FOR
LIST OF CAUTIONS

1. This unit is not designed to handle any material other than human waste and toilet paper. The list of items that should not be used with this system includes, but is not limited to, feminine sanitary products, condoms, cotton balls and swabs, baby wipes, paper towels, etc.
2. Check to be sure your power source is capable of handling the voltage requirements of the motor, as indicated on the pump name plate.
3. The installation of variable level float switches is the responsibility of the installing party, and care should be taken that the tethered float switch will not hang up on the pump apparatus or pit peculiarities and is secured so that the pump will shut off. It is recommended to use rigid pipe and fittings and the pit be 18" or larger in diameter.
4. **Vent hole.** It is necessary that all submersible sump, effluent, and sewage pumps capable of handling various sizes of solid waste be of the bottom intake design to reduce clogging and seal failures. If a check valve is incorporated in the installation, a 3/16" vent hole must be drilled in the discharge pipe below the check valve and pit cover to purge the unit of trapped air. Vent hole should be checked periodically for clogging. The vent hole on a High Head application may cause too much turbulence. If you choose not to drill a vent hole, be sure the pump case and impeller is covered with liquid before connecting the pipe to the check valve. **NOTE: THE HOLE MUST BE BELOW THE BASIN COVER AND CLEANED PERIODICALLY.** Water stream will be visible when pump is operating.
5. Pump should be checked frequently for debris and/or buildup which may interfere with the float "on" or "off" position. Repair and service should be performed by Zoeller Pump Company Authorized Service and Warranty Center.
6. Maximum operating temperature for standard model pumps must not exceed 130 °F.
7. Do not operate a pump in an application where the Total Dynamic Head is less than the minimum Total Dynamic Head listed on the Pump Performance Curves.
8. For health reasons, do not unplug, turn off, or disable pump and use pump tank system as a way to fill up a sink or laundry tray, etc.
9. Pumps must be installed in accordance with the National Electrical Code and all applicable local codes and ordinances. Pumps are not to be installed in locations classified as hazardous in accordance with National Electric Code, ANSI, NFPA 70.

NOTE: Pumps with the "UL" mark and pumps with the "US" mark are tested to UL standard UL778. CSA certified pumps are certified to CSA standard C22.2 No. 108.

REFER TO WARRANTY ON PAGE 2.

LIMITED WARRANTY

Manufacturer warrants, to the purchaser and subsequent owner during the warranty period, every new product to be free from defects in material and workmanship under normal use and service, when properly used and maintained, for THE PERIOD MENTIONED IN THE CHART BELOW FOR THE SPECIFIC MODEL PURCHASED, from the date of purchase. Proof of purchase is required. Parts that fail within the warranty period, that inspections determine to be defective in material or workmanship, will be repaired, replaced or remanufactured at Manufacturer's option, provided however, that by so doing we will not be obligated to replace an entire assembly, the entire mechanism or the complete unit. No allowance will be made for shipping charges, damages, labor or other charges that may occur due to product failure, repair or replacement.

This warranty does not apply to and there shall be no warranty for any material or product that has been disassembled without prior approval of Manufacturer, subjected to misuse, misapplication, neglect, alteration, accident or act of nature; that has not been installed, operated or maintained in accordance with Manufacturer's installation instructions; that has been exposed to outside substances including but not limited to the following: sand, gravel, cement, mud, tar, hydrocarbons, hydrocarbon derivatives (oil, gasoline, solvents, etc.), or other abrasive or corrosive substances, wash towels or feminine

sanitary products, etc. in all pumping applications. The warranty set out in the paragraph above is in lieu of all other warranties expressed or implied; and we do not authorize any representative or other person to assume for us any other liability in connection with our products. Contact Manufacturer at, 3649 Cane Run Road, Louisville, Kentucky 40211, Attention: Customer Service Department to obtain any needed repair or replacement of part(s) or additional information pertaining to our warranty.

MANUFACTURER EXPRESSLY DISCLAIMS LIABILITY FOR SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES OR BREACH OF EXPRESSED OR IMPLIED WARRANTY; AND ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE AND OF MERCHANTABILITY SHALL BE LIMITED TO THE DURATION OF THE EXPRESSED WARRANTY.

Some states do not allow limitations on the duration of an implied warranty, so the above limitation may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Package Model	912	912	912	915	915	915
Pump Model	211/212	264	266	803	805	807
Warranty	2 year	3 year	3 year	3 year	3 year	3 year

In instances where property damages are incurred as a result of an alleged product failure, the property owner must retain possession of the product for investigation purpose.

DO'S & DON'T'S FOR INSTALLING UNIT

- DO** read all installation material with the unit.
- DO** inspect unit for any visible damage caused by shipping. Contact dealer if unit appears to be damaged.
- DO** remove all debris from the basin. Be sure that the pump will have a hard, level surface beneath it. **DO NOT** install on sand, gravel or dirt.
- DO** be sure that the area is large enough to allow proper clearance for the level control switch(es) to operate properly.
- DO Always Disconnect Pump From Power Source Before Handling.**
DO always connect to a separately protected and properly grounded circuit.
DO NOT ever cut, splice, or damage power cord (Only splice in a watertight junction box).
DO NOT carry or lift pump by its power cord.
DO NOT use an extension cord.
- DO** install a check valve and a union in the discharge line.
DO NOT use a discharge pipe smaller than the pump discharge.
- DO NOT** utilize this unit for pumping gasoline or other hazardous liquids.
- DO** test pump immediately after installation to be sure the system is working properly.
- DO** review all applicable governing codes and verify that the installation conforms to each of them.
- DO** consult manufacturer for clarifications or questions.
- DO** consider a two-pump system with an alarm where an installation may become overloaded or primary pump failure would result in property damages.
- DO** consider a D.C. Backup System where a sump or dewatering pump is necessary for the prevention of property damages from flooding due to A.C. power disruptions, mechanical or electrical problems or system overloading.
- DO** inspect and test system for proper operations at least every 3 months.

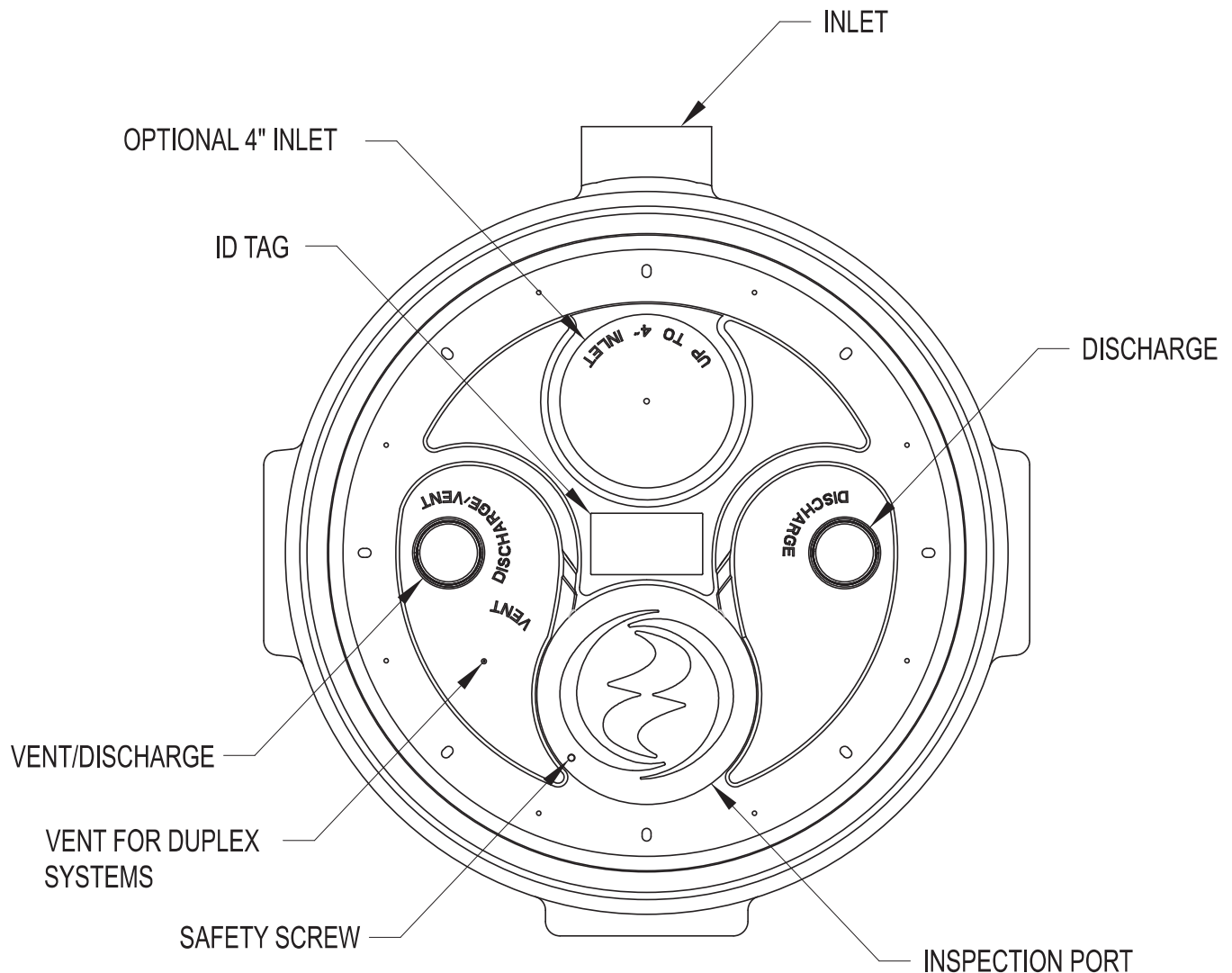
SERVICE CHECKLIST

CONDITION	COMMON CAUSES
A. Pump will not start or run.	Check fuse, low voltage, overload open, open or incorrect wiring, open switch, impeller or seal bound mechanically, motor or wiring shorted. Float assembly held down. Switch, damaged or out of adjustment.
B. Motor overheats and trips overload or blows fuse.	Incorrect voltage, negative head (discharge open lower than normal) impeller or seal bound mechanically, motor shorted.
C. Pump starts and stops too often.	Float switch tether length too short, check valve stuck open, or none installed in long distance line, overload open, bidding, sump pit too small.
D. Pump will not shut off.	Debris under float assembly, float bound by basin sides or other, switch, damaged or out of adjustment.
E. Pump operates but delivers little or no water.	Check inlet, strainer housing, discharge pipe, and vent holes for obstructions. Discharge head exceeds pump capacity. Low or incorrect voltage. Incoming water containing air or causing air to enter pumping chamber. Incorrect motor rotation. (3 phase pumps only)
F. Drop in head and/or capacity after a period of use.	Increased pipe friction, clogged line or check valve. Abrasive material and adverse chemicals could possibly deteriorate impeller and pump housing. Check line. Remove base and inspect.
G. Tank or fittings leak.	Carefully tighten pipe joints (use pipe dope) and screws. Check gasket location, tighten lid evenly. Do not over tighten fittings or screws.

If the above checklist does not uncover the problem, consult the factory. do you attempt to service or otherwise disassemble pump. Service must be performed by Zoeller authorized Service and warranty centers. Go to www.zoellerpump.com to find the authorized service center in your area.

RECOMMENDED INSTALLATION FOR ALL APPLICATIONS

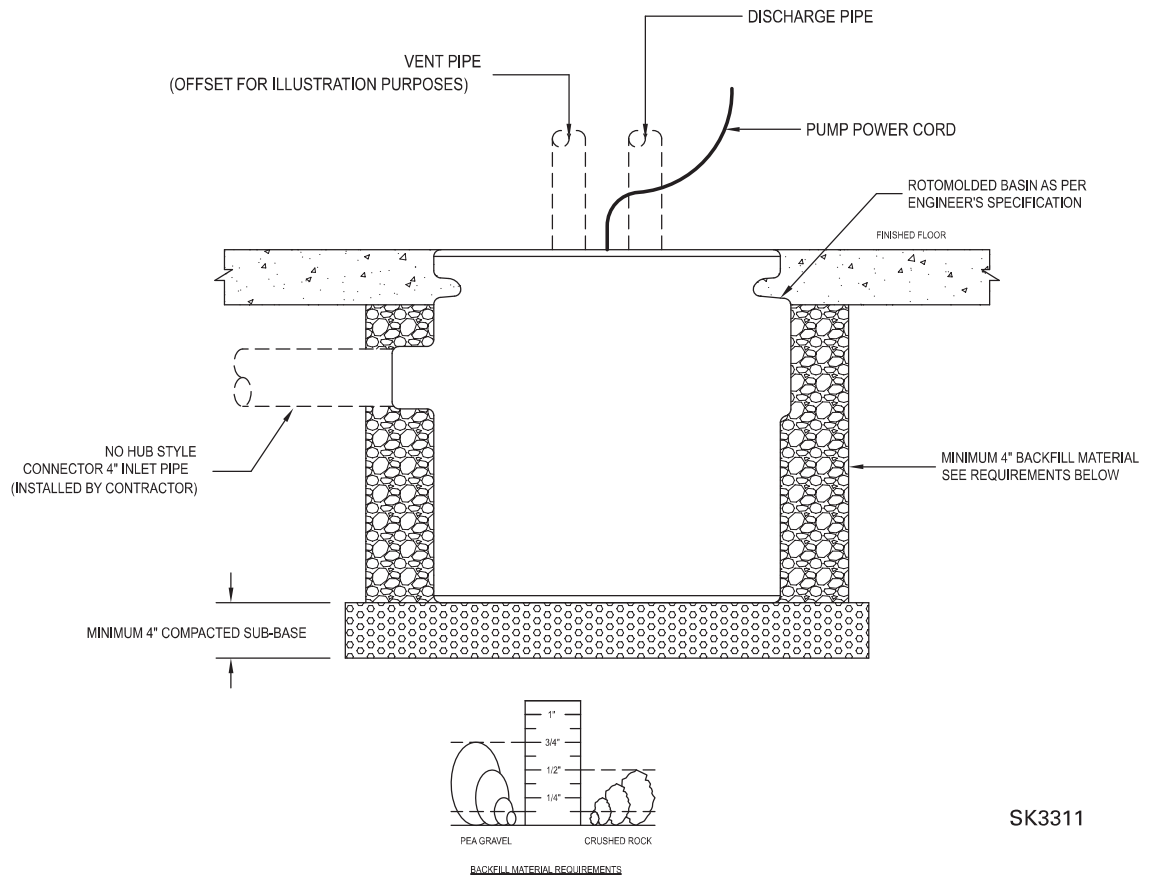
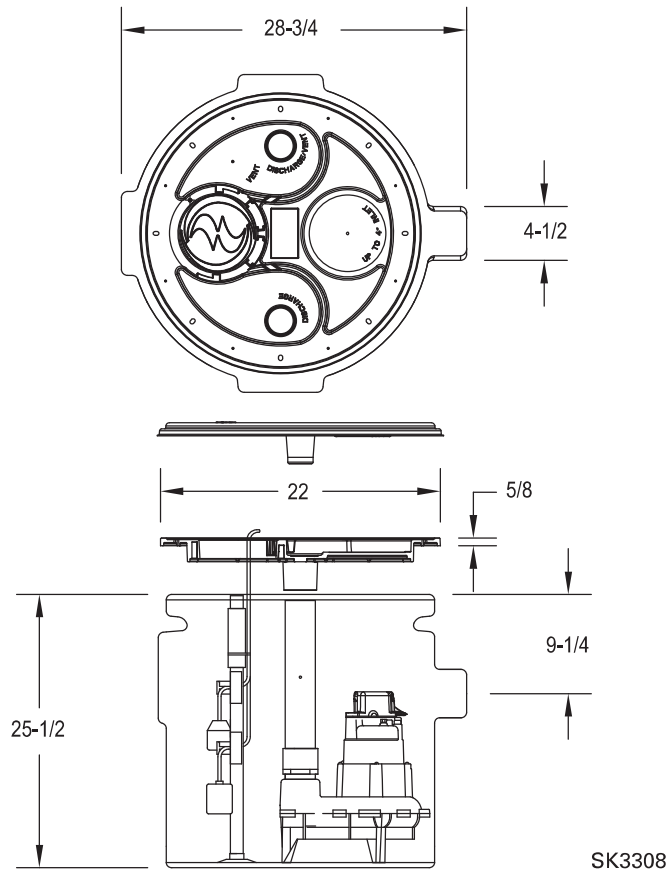
1. Electrical wiring and protection must be in accordance with governing electrical codes.
2. All installations require a basin cover to prevent debris from falling into the basin and to prevent injury.
3. Install proper Zoeller unichuck (combination union and check valve), preferably just above the basin to allow easy removal of the pump for cleaning or repair. If high head or below cover installation is required, use 30-0164 on 1-1/2" pipe, 30-0152 on 2" pipe and 30-0160 on 3" pipe.
4. When a Unichuck is installed, drill a 3/16" diameter hole in the discharge pipe even with the top of the pump. **NOTE: THE HOLE MUST ALSO BE BELOW THE BASIN COVER AND CLEANED PERIODICALLY.** (High Head unit see #4 under "Caution" on front page). Water stream will be visible from this hole when pump is operating.
5. Securely tape or clamp power cord to discharge pipe, clear of the float mechanism(s).
6. Use a discharge pipe equivalent in diameter to the pump's discharge.
7. Basin must be in accordance with governing codes and specifications.
8. Pump must be level and float mechanism(s) clear of sides of basin before starting pump.
9. Basin must be clean and free of debris after installation.
10. Gate valve, shut-off valve, or ball valve to be supplied by installer and installed according to any and all codes.
11. Locate float switches as shown in sketches. The best place for the "off" point is above the motor housing and positioned 180 °F from the inlet. Never put "off" point below discharge on pump.
12. Gas-tight seals are required to contain gases and odors.
13. Vent gases and odors to the atmosphere through vent pipe.
14. Optional pump stand (P/N 10-2421) eliminates the need for blocks or bricks under the pump. For use with effluent and dewatering pumps only.
15. Optional watertight control box available, see FM1597 for details.
16. For proper spacing of "On" - "Off" switches refer to local or national standards and guidelines.
17. Optional septic tank risers for easy access to pump, controls and filters.



SK3310

All installations must comply with all applicable electrical and plumbing codes.

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SK3311

Introduction

The preassembled 24 x 24 sewage system is complete and job ready from the factory for easy installation. Its compact design makes it perfect for low burial depth applications. The system features a removable access port that allows for the immediate observation of pumps and floats. Additional features include a 41-gallon capacity, a built in anti-flotation device, and a construction cover to keep everything clean during installation.

INSTALLATION

Preparation

Inspect your basin assembly. If the unit has been damaged in shipment or if parts are missing, contact your distributor before installing. Carefully read all literature to familiarize yourself with details regarding installation and use. Retain materials for future reference. All installations must comply with all applicable electrical and plumbing codes, including but not limited to the National Electrical Code, local, regional and/or state plumbing codes, etc.

The clear construction cover can be reattached after reading the appropriate materials. It will ensure the cover, cordage, etc. remains clean during installation.

Excavation

Excavate a hole for the basin in a very low traffic area in proximity to a proper electrical outlet. The hole should be at least 8" larger in diameter than the basin in order to leave 4" of backfill all the way around the perimeter. A minimum of 4" of compacted subbase is also required. Backfill and subbase should be 1/8" to 3/4" pea gravel or 1/8" to 1/2" crushed stone.

Basin Placement

Ensure compacted subbase is free of any sharp rocks that could come into direct contact with the basin. Place basin into pit and verify that it is level. It is recommended that the top of the basin is level with the surrounding finished floor. Once the desired positioning has been achieved, partially backfill basin to help hold in place. Ensure enough room is left below the inlet to make the inlet connection. Connect the 4" inlet pipe using a no-hub style connector and finish backfilling around the basin with the specified media. Care should be taken not to damage components or leave voids when backfilling. Finish grade of floor should be poured in place around the top 6" of the basin assembly.

Electrical Connections



⚠ WARNING **FOR YOUR PROTECTION, ALWAYS DISCONNECT PUMP FROM ITS POWER SOURCE BEFORE HANDLING.** Single phase pumps are supplied with a 3-prong grounded plug to help protect you against the possibility of electrical shock. **DO NOT, UNDER ANY CIRCUMSTANCES, REMOVE THE GROUND PIN.** The 3-prong plug must be inserted into a mating 3-prong grounded receptacle. If the installation does not have such a receptacle, it must be changed to the proper type, wired and grounded in accordance with the National Electrical Code and all applicable local codes and ordinances.



⚠ WARNING **Risk of electrical shock.** Do not remove power supply cord and strain relief or connect conduit directly to the pump.



⚠ WARNING Installation and checking of electrical circuits and hardware should be performed by a qualified licensed electrician.

Discharge/Vent

The 2" threaded discharge and vent ports are located and labeled on top of the cover. Installations containing sewage pumps: 211, 212, 264, or 266 models must not use a discharge smaller than 2". Installations containing grinder pumps: 803, 805, or 807 must not use a discharge smaller than 1.25". All venting needs to be installed in accordance with any/all local and national plumbing codes.

Simplex:

Using an adapter, connect discharge pipe to the "Discharge" 2" threaded port and connect vent pipe to the "Discharge/Vent" 2" threaded port.

Duplex:

Using an adapter, connect discharge pipes to both 2" threaded ports on top of the cover. For the vent, use a 3" hole saw to drill a hole located at the pilot hole indentation on the cover. Install the included pipe seal and use 2" pipe for the vent.

Inspection Port

912/915 24x24 systems are equipped with an inspection port in the lid to allow for the convenient observation and replacement of pump/alarm floats as needed. For access, remove the safety screw located on top, turn the inspection cap counterclockwise and lift.

Float heights are preset from the factory for optimum performance. During startup, ensure all floats have adequate clearance and are operating appropriately.

Float tree removal:

The float tree may be easily removed for the inspection and replacement of floats. It is held in place with compression between the lid and basin. To remove the float tree, simply push down on the handle on top to free it from the bottom of the lid. Lift the tree and floats upward through the inspection port. Lift the appropriate cord seals from the top of the cover to relieve any attached cords. To reattach, ensure cord seals have been fully inserted and lower the float tree back through the inspection port. Reinsert the bottom of the float tree into the premolded ring and push down on the top handle to reattach on the premolded bottom section of the lid. Ensure floats are oriented with adequate clearance for operation.

NOTES

[illegible]

NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



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