


Typical Installation Instructions & Warranty Information

**Explosionproof
Grinder Pump**
for Flexible Hose & Horizontal Slideface


Safety Instructions


Please read prior to the installation and operation of pump. The information provided is for SAFETY and to help PREVENT EQUIPMENT PROBLEMS.


To help you understand this information, refer to the symbols and definitions below:


 **WARNING** Indicates a hazard that can result in serious personal injury, death, or major property damage if ignored.


 **CAUTION** Indicates a hazard that can or will cause minor personal injury or property damage if ignored.


 Biohazard can cause serious personal injury.

 **HOT!** Severe burns could occur on contact.

 Rotating machinery. Amputation or severe laceration can result.

 Hazardous fluids can cause fire or explosions, burns or death could result.

 Hazardous voltage can shock, burn, or cause death.

 General warning that can result in personal injury or factors related to install, operation, or maintenance to equipment if ignored.

Only qualified personnel should install, operate, and repair pump. Any electrical work should be performed by a qualified electrician

 **WARNING**

To reduce risk of electrical shock, pump and control panels must be properly grounded in accordance with the National Electric Code (NEC) and all applicable codes and ordinances.

 **WARNING**

To reduce risk of electrical shock, always disconnect the pump from all power sources before handling or servicing. Follow lock out tagout procedures.

 **CAUTION**

This station has more than one power supply connection point. To prevent electrical shock, disconnect all power sources before service.

 **CAUTION**

Thermally protected automatic reset motor will restart without warning after protector trips. Always disconnect motor from power supply before servicing.

Regulatory agencies advise that certain materials should not be introduced into any sewer, please refer to the user instructions for a more detailed list of items.

In the event of power failure or blackouts, minimize water consumption within the home to prevent backup. Refer to user instructions, **Power Failure**, if service is interrupted.

Make certain that all discharge shutoff valves are fully open (curb stops, slider valve, etc.). Valves must not be closed when the pump is operating. Refer to **Test Procedures**.


Refer to user instructions, **Periods of Disuse**, if your home or building is left unoccupied for long periods of time.

 **CAUTION**

Pump may build up heat and pressure during operation. Allow time for pump to cool prior to the start of handling or servicing.

 **CAUTION**

DO NOT pump hazardous materials (flammable, caustic, etc.)

 **DO NOT** wear loose clothing that may become entangled in the grinder cutter wheel or other moving parts.

Ensure that rope is securely fastened before lifting. Do not operate pump without safety devices in place and always replace safety devices that have been removed during service or repair.

Secure the pump in its upright position so it cannot tip over, fall, or slide.

Do not exceed manufacturers recommendation for maximum psi, as this could cause the pump to overheat.

Inspect cables and ensure they are protected to avoid punctures, cuts, bruises, and abrasions.



Never handle connected power cords with wet hands.

To reduce the risk of electric shock, all wiring and junction connections should be made per NEC and all applicable codes and ordinances.

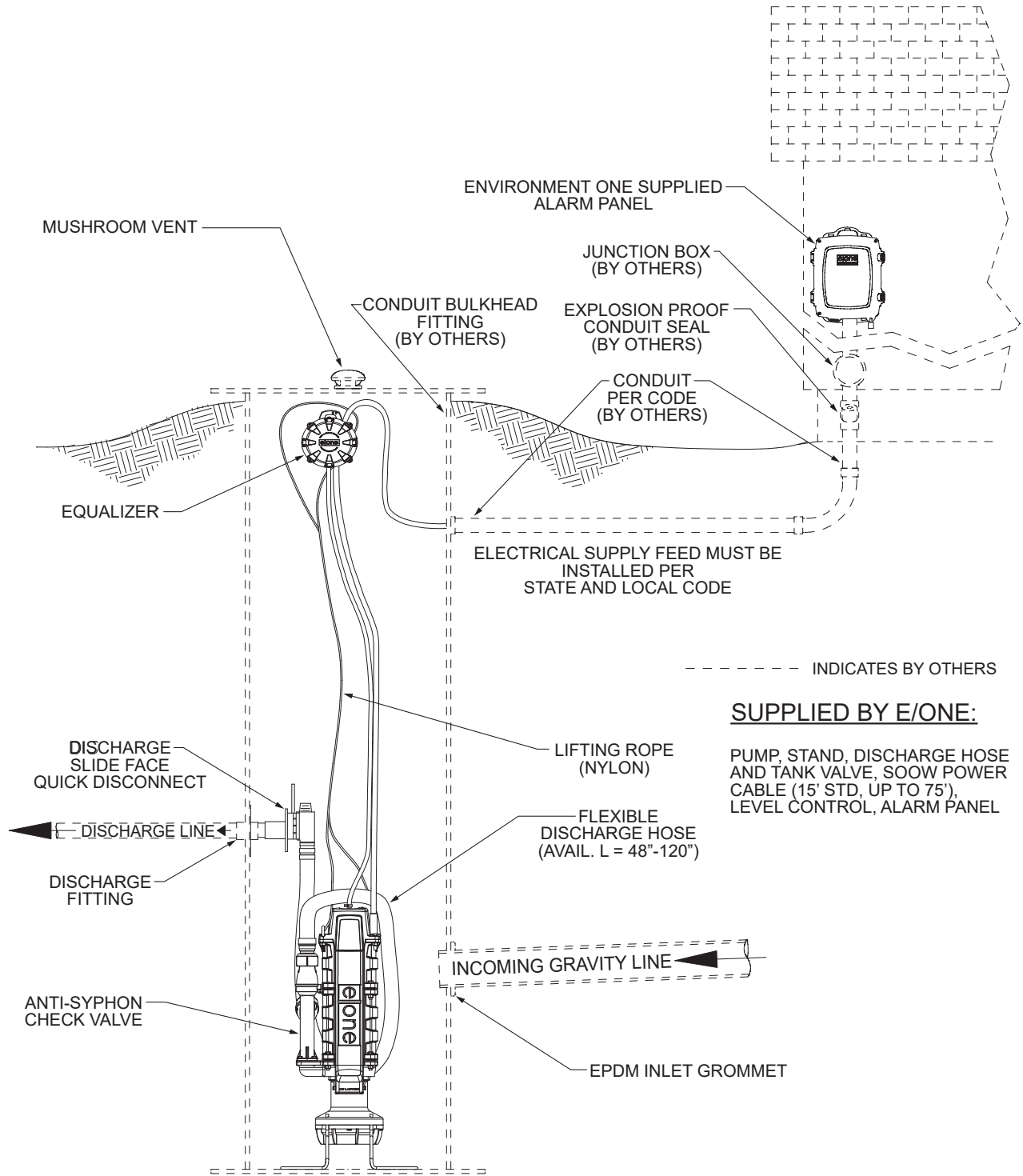


To protect the health and safety of our employees, products returned must be cleaned, sanitized, or decontaminated as necessary prior to shipment.

Environment One is not responsible for losses, injury, or death resulting from a failure to observe these safety instructions, misuse or abuse of pump or equipment.



WX Installation Layout



**INSTALLATION IS TO CONFORM TO NEC ARTICLE 501

STATION AND PUMP MUST BE INSTALLED PER ALL LOCAL, STATE AND NATIONAL ELECTRICAL AND PLUMBING CODES

Read all instructions before starting unit installation. If you have any questions, call your local distributor or Environment One's Service department for assistance at 518-346-6161.

No modifications can be made to this unit without affecting the Explosionproof listing, the safe operation of the product, as well as the manufacturer's warranty.

This product can only be serviced by Environment One personnel. Call Environment One's Service department at 518-346-6161.



Note: Occupational Safety and Health Standard (OSHA) mandates that anyone entering a confined space (such as sewage tank, manhole, septic tank, etc.) must follow the confined spaces rules and regulations. This can be found in Code of Federal Regulations Book 29, Section 1910.146, distributed by OSHA. This gives guidelines on how to safely enter tanks to make needed changes or repairs. **If possible, make all changes or repairs without entering the tank.**

Before beginning pump installation, unpack hardware to ensure all items needed to complete the installation are accounted for. Inspect station to see if additional items not supplied by Environment One will be needed to complete the job, such as plumbing hardware kit, replacement tank, special tools, electrical hardware, etc.

This is a sewage handling pump and must be vented in accordance with local plumbing codes. **This pump is approved for use in sewage applications that may be classified as**

- Class I, Division 1, Group D
- Intrinsically safe
- Certified by ETL to FM3600, 3610, and 3615 standards in accordance with National Electric Code, ANSI/NFPA 70. All piping and electrical systems must be in compliance with applicable local and state codes.

Safety Warnings

A **Caution** statement in this manual indicates a hazard that can or will cause minor personal injury or property damage if ignored.

A **Warning** statement in this manual indicates a hazard that can result in serious personal injury, death, or major property damage if ignored.

Warning

- Thermally protected automatic reset motor will restart without warning after protector trips. Always disconnect motor from power supply before servicing.
- To reduce the risk of electrical shock, refer to instruction manual for proper installation.
- Substitution of components may impair intrinsic safety.
- To prevent ignition of flammable or combustible atmospheres, disconnect all power sources before servicing.
- Never throttle output valve.

Caution

- To reduce the risk of electrical shock, install all electrical connections above top grade level of the sump or in a listed liquid-tight panel box.
- This unit has more than one power supply connection. Disconnect all power supplies before servicing.
- For use in Class I, Division 1, Group D hazardous (classified) location, as certified by ETL to Factory Mutual Standards
- Acceptable for outdoor use in a tank
- Designed and manufactured in accordance with UL 778 listing standard
- This explosionproof pump is to only be serviced by Environment One Factory Personnel. Unauthorized repairs may void warranty and hazardous location listing, as well as the safe operation of this product.

Pump Specifications

Manufactured by: Environment One Corporation	Manufactured in: Niskayuna, New York, USA
Series: Extreme Max Pressure: 80 psi HP: 1 Phase: 1	Model: WX Voltage: 240VAC Max Amperage: 8 T-Code: T3C

Preparation of Tank

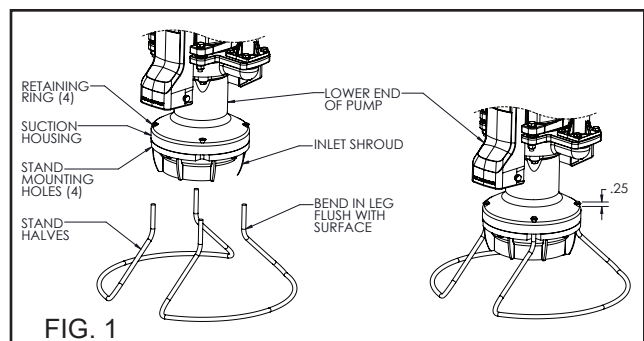
1. Remove tank lid.
2. Inspect lid integrity:
 - Clean all debris from lid
 - Inspect lid to ensure it is capable of supporting loads it may encounter (people, lawn tractor, trailer, etc.).
 - Inspect to ensure that lid can be sealed to prevent ground water infiltration. Note: If tank lid is deficient in any way, replace it.
3. Clean tank of any dirt and debris.
4. Inspect tank interior for structural integrity and leak tightness. Verify that the tank has been installed level for proper operation. **Failure to prevent all infiltration may cause premature pump failure and void warranty.**
5. Grade around the tank to prevent ground water infiltration during heavy rain.

Installing the Explosionproof Pump

1. Unpack all materials. Warranty registration and user instructions must be given to the owner. Hardware packed with the unit will be used during installation.

2. Do not drop, roll or impact the pump. Lift using the rope on the pump.

3. Attach pump stand. (Fig. 1) Temporarily rest the grinder pump on its side. Using a block of wood or similar object, prop up the lower pump end to allow installation of the pump stand. Align the two legs of each pump stand half with two of the holes in the pump lower end. Push the stand legs into the pump lower end. Using a mallet, ensure that the stand legs bottom into the mounting holes. Repeat for the other stand half. Turn the pump upright on the installed stand.



4. Install slide face discharge receiver to tank's discharge hub. The slide face has a 1 ¼-inch solvent weld socket. A 1 ¼-inch PVC nipple is supplied if a threaded connection is necessary. Glue nipple to slide face with Schedule 80 primer and glue. Take care not to get glue on slide face surfaces. (Fig. 2)

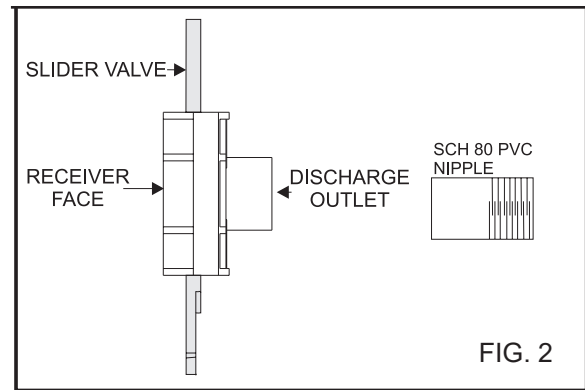
Flexible Hose Discharge

Refer to any documentation that may have shipped with your discharge.

5a. Attach the discharge hose to the anti-siphon check valve. Use pipe sealer on threads to ensure leak tightness. (Fig. 3)

6a. Check the O-ring on the slideface adapter for adequate lubrication. (Fig. 5)

7a. Attach discharge installation tool on male adapter. (Figs. 3 and 4)



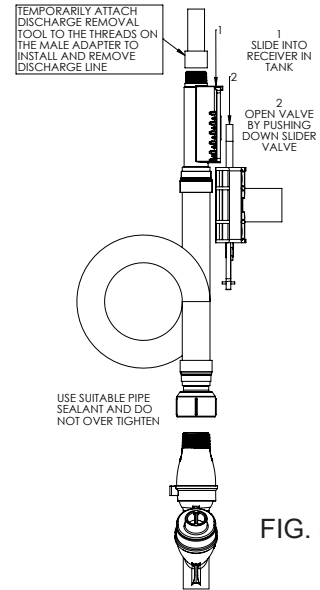
Complete Pump Installation

8. Carefully lower the pump into the tank. Place pump so anti-siphon check valve is on opposite side of discharge in tank. Refer to the "Installation Layout" drawing in the front of this manual.

9. Rotate discharge hose and male adapter to create a loop or coil. Slide male adapter into slide face receiver until it seats. Push down on slider valve assembly to open. (Fig. 3)

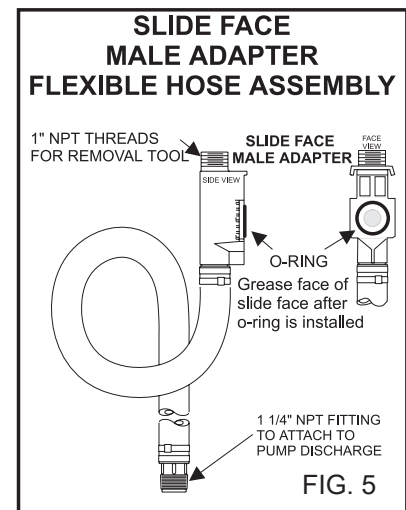
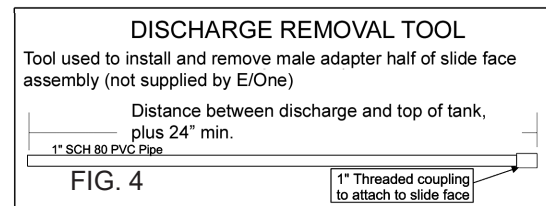
10. Hang power cable, breather tubing with Equalizer, and lifting rope to prevent them from laying in sewage. Keep between 18 inches and 24 inches of power supply cable in tank. The Equalizer should be hung as high as possible in the tank. Refer to the "Installation Layout" drawing on page 3.

11. Install vent assembly in cover assembly. Hole size for vent grommet is 3 inches. The vent must be installed per national and local codes to ensure proper operation. Failure to properly vent tank will result in faulty operation and will void warranty.



12. Connect the pump to the alarm panel. The power cable should be installed between tank and electrical panel per National Electric Code (per NEC Article 501 Class 1 Location) and local codes. Maximum distance between pump and panel is 100 feet (maximum continuous cable length on the pump from the factory is 75 feet). The cable that is provided with the pump is not direct-bury cable. Plug and seal all electrical components (junction box, conduit, etc.) inside tank and control panel to ensure a watertight connection. **Failure to seal all joints may cause premature pump failure and void warranty.** Waterlogged junction boxes are one of the most common sources of grinder pump problems. It is recommended, when using a junction box, that the wire connections within the box are made with waterproof connectors to ensure they are protected from possible water that may leak inside. All electrical components and their installation must comply with NEC Article 501, Class 1 location, to ensure a proper explosionproof installation.

13. Power source to the panel must be 240 VAC; two hot legs neutral and ground are required. Wire the alarm panel per the diagram provided within the enclosure. A dedicated 30-amp breaker with ground and separate neutral is required for simplex and duplex. A dedicated 40-amp breaker is required for triplex alarm panels. A dedicated 50-amp breaker is required for quadplex alarm panels.



Test Procedure

This unit has more than one power supply. Identify and isolate/disconnect all power supplies before troubleshooting and/or performing service work. When the system is complete and ready for use, the following steps should be taken for each grinder pump in the station to verify proper pump and high-level alarm operation.

a) Make certain that all discharge shutoff valves are fully open (curb stops, slider valve, etc.). Valves must not be closed when the pump is operating.

b) Turn off the power at main power supply and panel(s). (Ignore all Trouble indications, LEDs and/or messages until the panel is reset at the end of this procedure.) Use an ohmmeter set at the 2-meg scale. Check the continuity between the following leads from the pump (tests should be performed with the pump and alarm breakers inside the panel OFF):

- Green to black
- Green to white
- Green to red
- Red to orange
- Red to blue

Wire Color	Function
Red	Manual Run
Black	Pump L1
White	Pump L2
Green	Ground
Orange	Alarm Power Feed
Blue	Alarm Power Return

All of these tests must read an open circuit. A short at any of these test points will cause premature pump failure if not corrected.

c) Turn on power at main power supply only.

d) Check voltage from the main power supply. The voltage must be within 10% of the nameplate voltage (i.e. 240V=216V to 264V). Note the voltage.

e) Verify the panel wiring matches the wiring diagram located in the alarm panel enclosure. Then turn on the alarm power circuit breaker(s). Leave pump breaker off.

f) Fill the tank with water until the alarm turns on. This should occur when the water level reaches the top of the pump approximately. Then turn off the water.

g) Turn on the pump power circuit breaker. (Note: If this is a multiplex station, the pumps should be energized one at a time so amperage can be recorded individually). The pump should turn on within a few seconds.

h) Take a current (amperage) reading off the white lead to the pump. Note the amperage. Repeat Step “g” and Step “h” for additional pumps at this station. Ensure that only the pump being tested has its associated breaker energized. The reading should be between 5 and 8 amps for 240VAC/60Hz service.

Higher amperage readings equal a higher discharge pressure. If the amperage is greater than the listed maximum check the discharge line for a blockage.

The alarm should turn off after a few minutes. Following that, it should be a few additional minutes before the pump turns off.

i) Clear/Reset the alarm panel(s):

- Sentry panels: Reset is not required.
- Protect Panel: Turn pump and alarm breakers off and back on simultaneously.
- Protect Plus Panels: Perform a “cold start” from the Initialize System menu. Any user settings that were previously chosen will not be reset.

If any Trouble or alarm conditions are indicated after the panel is reset, contact your local service provider.

j) Close and lock the alarm panel(s).

k) Inspect the lid gasket and fasten lid to tank.

Call your local E/One distributor if you experience any problems. Please have ready the unit serial number, voltage, amperage read during startup, type of application, and a description of the problem.



Scan code for service info at
eone.com/technician



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User Instructions

for the Environment One Grinder Pump

General Information

Your home is served by a low pressure sewer system; the key element is an Environment One grinder pump. The tank collects all solid materials and wastewater from the house. The solid materials are then ground to a small size suitable for pumping as a slurry with the wastewater. The grinder pump generates sufficient pressure to pump this slurry from your home to the wastewater treatment receiving line and/or disposal plant.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: 1) this device may not cause harmful interference; and 2) this device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Periods of Disuse

If your home or building is left unoccupied for longer than a couple of weeks, perform the following procedure:

Purge the System:

Run clean water into the unit until the pump activates. Immediately turn off the water and allow the grinder pump to run until it shuts off automatically.

Duplex Units:

Special attention must be taken to ensure that both pumps turn on when clean water is added to the tank.

Caution: Do not disconnect power to the unit

Power Failure

Your grinder pump cannot dispose of wastewater without electrical power. If electrical power service is interrupted, keep water usage to a minimum.

Pump Failure Alarm

Your Environment One grinder pump has been manufactured to produce an alarm signal (120 volt) in the event of a high water level in the basin. The installer must see that the alarm signal provided is connected to an audible and/or visual alarm in such a manner as to provide adequate warning to the user that service is required. During the interim prior to the arrival of an authorized service technician, water usage must be limited to the reserve capacity of the tank.

Care and Use of Your Grinder Pump

The Environment One grinder pump is capable of accepting and pumping a wide range of materials, and an extensive grind test is required in order to obtain NSF approval. However, regulatory agencies advise that the following items **should not** be introduced into any sewer, either directly or through a kitchen waste disposal unit:

- **Glass**
- **Seafood shells**
- **Diapers, socks, rags or cloth**
- **Syringes**
- **Cotton swabs**
- **Personal/cleaning wipes & sponges**
- **Disposable toothbrushes**
- **Latex/vinyl items**
- **Metal**
- **Plastic objects (toys, utensils, etc.)**
- **Kitty litter**
- **Dental floss**
- **Aquarium gravel**
- **Sanitary napkins or tampons**
- **Cigarette butts**

Caution: Kitchen garbage disposals do not keep grease/oil out of the plumbing system

In addition, you must **never** introduce into any sewer:

- **Explosives**
- **Strong chemicals**
- **Lubricating oil and/or grease**
- **Flammable material**
- **Gasoline**

Items introduced into the sewer system from your home can potentially impact the water environment. Proper disposal of household wastes such as window cleaners, unused/expired pharmaceuticals, paint thinners, fats, fruit labels, etc. is important. For more information, visit wef.org.

For service, please call your local distributor:

LIMITED WARRANTY



FOR ALL D-SERIES, W-SERIES & UPGRADE

Environment One Corporation offers a limited warranty that guarantees its product to be free from defects in material and factory workmanship for a period of two years from the date of installation, or 27 months from the date of shipment, whichever occurs first, provided the product is properly installed, serviced and operated under normal conditions and according to manufacturer's instructions. Repair or parts replacement required as a result of such defect will be made free of charge during this period upon return of the defective parts or equipment to the manufacturer or its nearest authorized service center.



**For More Information
Scan QR Code or Visit:**

eone.com/sewer-systems/knowledge/warranty

Model Number

Serial Number

Installation Date

Notes



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