

HOMEOWNER OPERATION & MAINTENANCE MANUAL

ENVIRONMENT ONE GRINDER PUMPS



Distributor and Service Provider

F.R. MAHONY & ASSOCIATES
273 WEYMOUTH ST.
ROCKLAND, MA 02370
Main Office 781-982-9300



Outdoor Model

General Information

In order to provide you with suitable wastewater disposal, your home is serviced by a low-pressure sewer system.

The key element in this system is an Environment One Grinder Pump. The tank collects all effluent from the house. The solid materials are then ground to a small size suitable for pumping a slurry with the effluent water.

The Grinder Pump generates sufficient pressure to pump this slurry from your home to the wastewater treatment receiving line and/or disposal plant.

USER INSTRUCTIONS FOR THE ENVIRONMENT ONE GRINDER PUMP

Congratulations on your Environment One Grinder Pump investment. With the proper care and by following a few simple guidelines, your Grinder Pump will give you years of dependable service.

Care and use of your Grinder Pump

The Environment One Grinder Pump is capable of accepting and pumping a wide range of materials. It is not necessary to panic if an *occasional* object is mistakenly “flushed”.

Regulatory agencies advise the following items should not be introduced into any sewer either directly, or through a kitchen waste disposal unit:

Glass, Diapers, cloth, wipes of any kind, Swiffer Pads
Metal, Plastic objects (toys, utensils, etc.)
Seafood Shells Sanitary napkins or tampons
Kitty Litter Aquarium Gravel

In addition, you must NEVER introduce into any sewer:

Explosives, Strong chemicals (paints and solvents)
Gasoline, Flammable material
Lubricating oil and/or grease

Periods of disuse and winterization:

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

Purge the system:

Run clean water into the unit (about a bathtub full), immediately turn off the water and allow the Grinder Pump to run until it shuts off automatically.

It is recommended that the power be left on to the unit.

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

IMPORTANT CONTACT INFORMATION

LOCAL DISTRIBUTOR AND SERVICE

F.R. Mahony & Associates
Rockland, MA
Main Number 781-982-9300

Dawn Marcinkus, Service Coordinator
Service Number 508-765-0051

PUMP MANUFACTURER:

ENVIRONMENT ONE CORPORATION
2773 BALLTOWN ROAD
NISKAYUNA, NEW YORK 12309-1090

MAINTENANCE

Environment One Pumps require no periodic lubrication or maintenance.
Homeowners should follow all instructions for the proper operation of their Grinder Pump.
Repair service should only be provided by an authorized factory trained professional.

LOSS OF POWER

If a power outage occurs please keep water use to a minimum. Once the power comes back on, the alarm may sound, this indicates that the pump tank is at or near capacity. It also means that power has been restored and the pump should pump the tank down. The alarm should clear within 5-10 minutes.

ALARM

If a pump fails to come on, an alarm will contact will close. The alarm will continue to exist until the problem is remedied.

IN EVENT OF AN ALARM

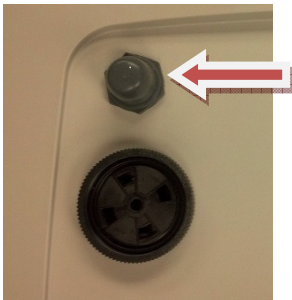
The Alarm indicates that the water level in the unit is too high. This is the warning that the unit may back up. It is suggested to Stop the use of all water.

If an alarm condition does not clear itself after 15 minutes please call for service.

Repetitive intermittent alarms should be reported to service as well as this indicates a part could be wearing out or not working properly.

Silencing an Alarm

The alarm may be silenced by pushing the silence button located on the bottom of the alarm panel - the light will stay lit.



Your Grinder Pump Panel May be Equipped with the Following Options

Auto Transfer Generator Connection *(Optional – If So Equipped)*

This panel provides automatic power transfer without having to open the alarm panel or having to operate any manual transfer switching. **Please see appendix for complete description and instructions.**

Protection Package *(Optional – If So Equipped)*

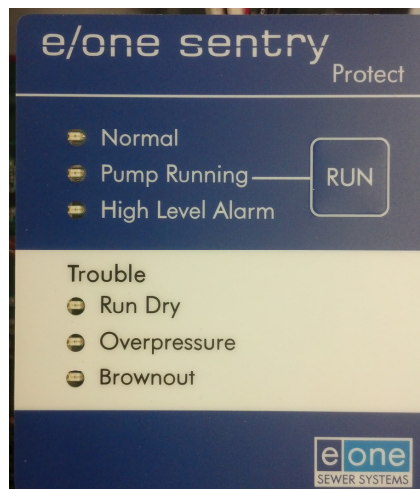
This monitors and protects the pump system from:

Pump Run Dry Condition -Running the pump with no water can damage the pump. This feature senses a low amperage condition when the pump runs that if low enough would indicate the pump is running but there is no water in the tank

Pump Overpressure Condition - running the pump with at high pressures can damage the pump. This feature senses a high amperage condition when the pump runs that if high enough would indicate the system pressure is high. If the condition persists, this feature will keep the pump from running. In most cases this alarm indicates a blockage or closed valve in the piping system after it leaves the pump. In some cases it could mean there is a component failure in the pump.

Electrical Brownout Condition - this will keep the pump from running if it detects the voltage from the house circuit breaker panel to be under 12% of nameplate. Running at low voltage can damage your pump and is not covered by warranty

The **Protection Package** alarm indicator panel is intended to be accessed by trained service personnel. It is located on the inside of the front cover of the panel. The panel should be kept padlocked at all times.



Protection Package Alarm Indicator Panel

Alarm Sentry *(Optional – If So Equipped)*

Some Homeowners have chosen to have an Alarm Sentry option installed for remote mounting. This will provide for an alarm condition (high water in the tank) **with or without power. If the power is out and an alarm occurs**, keep water use to a minimum. Once the power comes back on the alarm should clear within 5-10 minutes. **Please see appendix for complete description.**



KEEPING WATER USE TO A MINIMUM

Listed below are a few helpful hints:

1. Flush only when necessary.
2. If you need to run the tub or shower, put a stopper in the drain to keep the water from going down the drain.
3. Do not run appliances that require water, such as washing machines or dishwashers.
4. Use sinks sparingly.

GRINDER PUMP SERVICE REQUEST

Before you call - Please verify that there is power to the grinder pump unit. Check circuit breakers at the alarm panel and also at the house panel

Please NOTE: Service technicians need clear access to the cover of the pump. Removing landscape objects, turf, mulch etc. and any restoration thereof is not covered under this warranty. You may be charged for wait time and or your service may be delayed if the technician cannot gain access.

CALL:

**F. R. Mahony & Associates
Emergency Service number 508-765-0051**

SERVICE POLICY

Your grinder pump came with a 5 year parts and labor warranty. This warranty covers manufacturer's defects. It is not a "bumper to bumper" free service warranty.

When you call for service

1. *You will be* informed of our service policy and current rates.
2. Before FRMA can send anyone to the site FRMA will need a valid CC to have on record, we accept MC Visa and AMEX, we will not charge your card unless that is your option for payment or we do not receive another form of payment.
3. If we determine that your problem is covered under warranty you will not be charged.
4. Payment is due at the time of service

Before calling for a repair, have the following information available for the service coordinator.

1. **Does an alarm condition exist?**
2. **If so, for how long?**
3. **Brief description of the problem:**
4. **Is the unit indoors or outdoors?**
5. **Address where pump is located**
6. **Name Phone**

APPENDIX

PORTABLE GENERATOR TRANSFER SWITCH PANEL



Environment One Corporation offers the Sentry Alarm panel for use with Environment One Pump Systems. These panels have standard options that are easily added to the base panel package. Panels can be furnished with an internal automatic generator transfer switch to allow grinder pump operation with an emergency generator during periods of extended power outages. In the event that normal power is lost, the transfer switch will automatically transfer power from utility power to emergency power once an emergency generator is connected to the emergency power plug. The automatic transfer feature is designed to use the main power supply at all times, unless emergency power is applied to the receptacle, complying with NEC & UL safety requirements. **NEVER apply emergency power to the generator receptacle when the pump is running.**

GENERATOR LOAD TRANSFER PROCEDURE

1. Open generator transfer switch cover.



2. Connect emergency power source (generator) to the panel by plugging it in using the properly sized connector to match the panel and generator.
Cables must be rated to 20-amp, 240-volt with L14-20 connectors.
3. Start the generator. If the portable generator is equipped with a circuit breaker, start generator with it off. Once the generator is at full power, turn the breaker on.
4. If the pump “on” level switch is calling for the pump to run, the pump will automatically start and will continue to run until the liquid level is at the “off” level.
5. If the basin is full to the “alarm” level the alarm will sound and may be silenced using the silence button described below. The pump will start and the liquid level will be lowered to shut off the alarm light and horn (if not silenced) and will continue to pump until the water level is at the “off” level.

6. If the “on” switch is not calling for the pump to run, the system will remain functional until the liquid level is raised to the “on” level. Only when the “on” level is reached will the pump operate under normal or emergency power.
7. When normal power is restored, shut off the emergency generator supply and unplug the emergency power cord. The Access cover on the alarm panel should snap closed and remain closed under normal operation.

A MINIMUM SIZE OF A 6500 WATT GENERATOR IS RECOMMENDED

Operate all generators outdoors with proper ventilation. Use of emergency generators in the home can result in dangerous carbon monoxide gas and can kill you in minutes. Properly ground Portable Generator per Generator Manufacturer’s instructions.

IMPORTANT

After using a generator connection it is recommended to inspect all power breakers to make certain none have tripped during the loss of and restoration of power. This includes the 30-amp double pole breaker in the main service panel and the 15-amp double pole 240 volt and 15-amp single pole, 120-volt breakers inside the E/One Sentry alarm panel. Close and lock all panels after completion of these inspections.

PORTABLE GENERATOR CONNECTION OPTION FOR INDOOR UNITS

Your panel is equipped with a generator receptacle and that is able to be connected to a properly located generator. The cord you use must be long enough to reach the panel

Additional to this offering we have sourced an outside generator receptacle and plugs to allow the building homeowner’s electrician to connect the alarm panel that is normally mounted inside on the basement wall to a cord that must be sized for the 20 Amp, 240 volt emergency power supply (*Please see E/One IH091-IDU installation instructions for specific panel instructions*). This remote outside receptacle allows the generator connection to be hard wired to the Outside receptacle and then connected to the alarm panel with the proper NEMA L14-20R female end to the provided L1420-P receptacle in the panel. The house electrician then runs the cable to the outside generator connection point thus allowing easy access to the plug and avoiding the chance of running cords through open windows or doorways. This adds a measure of protection to prevent exhaust gasses from entering the house or for cords to be run along the ground and risk shorts or damage to the cords.



The outside connection box can be supplied with disconnect switch (as shown left) if required by local Code or can be a simple plug-in connection. (Please consult local electrical Code)

The power transfer in the E/One Sentry Alarm Panel is automatic and will transfer the source of power to the generator side when the generator is connected to the panel receptacle and power is applied to the generator receptacle.

When the generator is removed, the power source will automatically transfer back to line (Electric Co.) power.

This automatic feature eliminates the need to operate manual switches and to do any work inside the alarm panel.

The emergency Generator connections are capable of accepting a 20-amp feed for the emergency connection. This is different than the line power required to be 30 amps. The reason for this is the line power is a full disconnect to the alarm and pump panel that has a 15-amp, double pole breaker for the pump and a 15-amp single pole breaker for the alarm. It is possible to have a 20-amp breaker in the main service panel trip before the pump breaker, thus the larger 30-amp disconnect is required to assure that if a breaker is to trip, it will be the pump breaker and power will still flow to the health board required redundant alarm circuit.

REMOTE SENTRY™ REDUNDANT ALARM PANEL

The Remote Sentry Panel is a remote, redundant alarm panel.

FRMA made the choice several years ago to make standard to E/One panels purchased for ALL Grinder pumps to have Switch-Over Dry Contacts (SODC). This enables a Remote Sentry to be added at any time that would be able to indicate a high level alarm EVEN during power failure.

ALL IH091-IDU Indoor units sold in New England have these features and are furnished with the Remote Sentry® with 50 feet of double-strand, 22-gauge round wire (aka bell wire). Installers are to install the Remote Sentry® near a living space to allow the residents to hear and see the alarm. (*Additional 22-gauge wire may be required to reach a suitable location*). This Redundant alarm operates with or without line power to the pump and serves as a secondary alarm as well as backup alarm in power loss conditions. The Remote Sentry® has a drop down panel to access “Test” and “Silence” buttons and has space for placement of a small instruction and service sticker. This panel is battery powered and does require testing and replacement of batteries. It is recommended to change batteries at the daylight savings interval which is the same time fire department officials commonly recommend changing batteries in smoke detectors.

Environment One Corporation offers the Remote Sentry Alarm panel for use with Environment Pump Systems. This panel is a separate alarm panel which connects to the “24V Max. Remote Sentry Contacts” found in the main Sentry Alarm Panel.



The E/One Remote Sentry display module provides visual and audible indication when the water level inside the grinder pump tank reaches a predetermined “high” level during normal operation, or in the event of a power outage (with optional contacts in panel). It is ideally suited for installations where the outdoor alarm panel location is obstructed from view, or where an Indoor Unit (IDU) installation is isolated in a utility room.

The Remote Sentry includes:

- A low profile attractive case (5.4”W x 3.69”H x 1.25”D)
- Lithium battery operated requires (4) Coin Cell Type CR2032, 3V or equivalent.
- Audible alarm (70dB)
- Push-to-silence audible alarm switch
- Push-to-test visual and audible alarm

SERVICE REQUIRED — If the battery voltage is low the LED will blink and the buzzer will be energized with short beeps. The push to silence will not change this condition until the batteries are replaced.

During a power failure, reduce the use of water to maximize the storage capacity in the pump chamber. Normal power failures are relatively short in duration and the pump has adequate capacity for these events. During extended power loss the Remote Sentry Alarm may sound to indicate the chamber is becoming full. This is an indication that the pump water level is at “high” level. Further reduce the use of water until power to the pump is restored by use of a generator or until line power returns.

If the Remote Sentry Alarm sounds during normal power condition this is an indication that the pump water level is at “high” level and the pump requires service. Reduce the use of water and call your local service provider at 508-765-0051.

Sentry Advisor™ Monitoring System

Some communities and many larger commercial systems now have an additional option for a cellular, web based alarm monitoring system. These systems monitor pump run cycles and run times as well as report alarm conditions. These systems will also warn of operating conditions that exceed expected cycles or run times to assist in preemptive service planning. These systems work alongside the standard alarm light and alarm buzzer. Owners should always follow the operational warnings provided with the standard alarm functions listed above.

The Sentry Advisor system will record operating run times and pump cycles and send this information to the Sentry Advisor webpage. Each location will have a screen display that can be monitored by service providers who may observe the operating condition of each pump. The monitoring system will report when a pump deviates from normal conditions prompting an investigation into the cause. If conditions persist, a service call may be scheduled to make repairs in advance of an actual pump failure.

Reporting can be set up to send a Text, Page or email as well as report to the master webpage.

It is important to note that this added service is a paid service that must be maintained by the homeowner. Consult with your Environment One dealer for specific details on how to access and maintain this service.