

**GRINDER PUMP
LOW PRESSURE
SANITARY SEWER
(LPSS) HOMEOWNERS'
GUIDE
2022**

GRINDER PUMP INTRODUCTION

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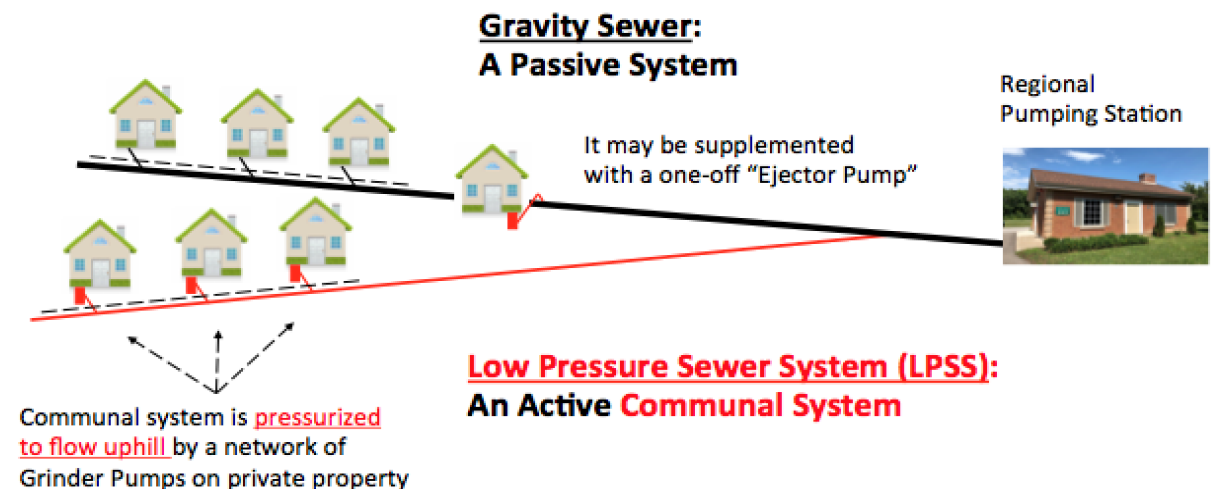
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QUICK REFERENCE

Town of Niagara-on-the-Lake notl.com	If an issue occurs, contact: Service Line Warranties of Canada 1-866-922-9004
	Service Line Warranties of Canada servicelinewarranties.ca
E-One eone.com	Town of Niagara-on-the-Lake 905-468-3266
	E-One 906-346-6161

You are receiving this Grinder Pump Homeowners' Guide because your home is equipped with a grinder pump, and we want to ensure you have the information you need. In this document you will find basic information on how a grinder pump works, basic care and maintenance information, available insurance coverage, frequently asked questions, and contact information.

Grinder pump sewer systems are used in areas where gravity sewers are not available. Wastewater normally flows downhill by gravity from a home's internal plumbing to a sewer lateral and into the municipal sewer main. When a residence is at a lower elevation than the sewer main, it requires a use of a pump to force the wastewater up to the communal low pressure sanitary system (LPSS).



*All information was verified at the time of circulation and posted to the website. Information will be verified yearly.

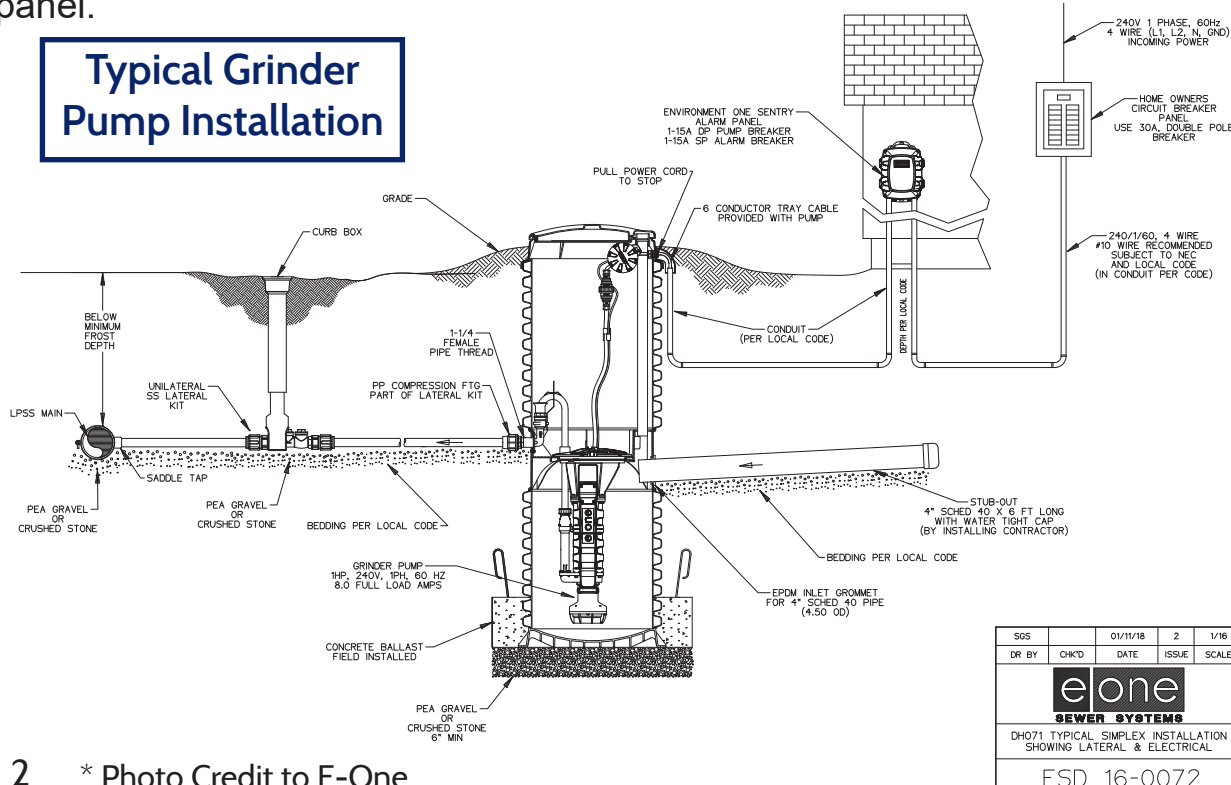
* Photo Credit to Grinder Pump Committee

PROTECT YOUR SYSTEM

Your home is served by a low pressure sewer system, and the key element is an Environment One(E/one) or an approved equivalent grinder pump. The grinder pump is typically buried in a convenient outdoor location on your property, which then connects to a network of pipes from other homes with pumping units in your area. The tank collects all solid materials and wastewater from the house. The solid materials are ground into a smaller size suitable for pumping as a slurry to the wastewater system. The grinder pump generates sufficient pressure to pump this slurry from your home to the low-pressure system on the street. It then flows and empties into the municipal gravity sewer main further down the system.

A grinder pump is a system with many components: a tank, pump assembly, curb stop, check flow valve, level controls, piping, valves and electrical. A grinder pump normally runs for one to two minutes and automatically turns off when the wastewater in the tank reaches the preset level. The pump is powered by electricity and is connected to a control panel. The control panel is wired to a circuit breaker in the home's electrical panel.

Typical Grinder Pump Installation



The grinder pump can handle any wastewater that is normally discharged to the sewer from the kitchen, bathroom or laundry. Some chemicals and materials may cause operating problems or safety hazards. It is advisable to check labels on chemicals prior to disposal. Never connect a sump pump to your sanitary plumbing without prior approvals under the Building Code.

Homeowner responsibilities:

- The grinder pumps are owned and maintained by the property owner
- Service calls and cost as a result of pump failure or misuse to system
- Insurance coverage

Town of Niagara-on-the-Lake responsibilities:

- Maintain system from property line to road pipes
- Flush system twice per year in Spring and Fall
- Give 3 weeks notice to residents when flushing program will occur

The most important homeowner precaution is to avoid introducing foreign objects to the system which is anything other than normal sewage and toilet paper.

! NEVER PUT ANY OF THE FOLLOWING MATERIALS INTO SINKS, TOILETS, OR DRAINS !

- Glass, metal, wood and plastic, seafood shells
 - Fish tank gravel, kitty litter
 - Dental floss
- Diapers, baby wipes or general cleaning wipes, sanitary napkins or tampons
 - Socks, rags, or cloth of any kind
- Any strong chemicals, toxic, caustic or poisonous substances
 - Gasoline, kerosene, fuel oil, paint thinner, paint
 - Antifreeze, lubricating oil or grease
 - Cooking fat (lard, oil, grease)
 - De-greasing solvents

These materials can damage the grinder pump, cause blockages, or may create unsafe conditions in your home pipes, tank and lead to potential corrective service costs.

Additional important maintenance information:

- Do not turn off the power to the pump
- Do not cover up the pump station lid
- Do not open the alarm panel
- Ensure access is available to the pump station at all times
- Keep plant growth and other debris away from the unit

If you go away on vacation for a length of time, flush the system before you go away. Run clean water into the unit until the pump activates. Turn off the water and allow the grinder pump to run until it shuts off automatically. This process will cleanse the pump and the pipes; leaving the tank filled with a minimum amount of clean water. This will also help to minimize odours that could accumulate during vacation.

INSURANCE

Insurance coverage for your grinder pump system is available from Service Line Warranties. The insurance covers the pump only and does not cover the control pane. The Town of Niagara-on-the-Lake will reimburse grinder pump owners for the cost of insurance, with proof of grinder pump coverage

Service Line Warranties of Canada
Website: servicelinewarranties.ca Customer service: 1-866-922-9004

Process for Reimbursement:

The homeowner must provide the Town with the following documentation:

- Insurance that covers the grinder pump specifically
- Proof that the coverage has been paid for
- Value of coverage for pump
- Proof of ownership prior to February 28, 2022

If the homeowner meets the above criteria and wishes to discuss the Insurance Rebate program for grinder pumps, please call 905-468-3266 Ext. 230.

Upon receiving the above information, the Town will provide a credit of up to \$75 on your property tax account.

This reimbursement program was approved by Council on February 14, 2022 and ratified on February 28, 2022 through the passing of Staff Report OPS-22-004.

ALARM INFORMATION

Your grinder pump is designed to produce an alarm signal in the event of a high-water level in the pump basin. If there is a grinder pump failure, the tank, which contains the pump, will become too full and sound an alarm

Alarm Panel



* Photo Credit to E-One

If your alarm sounds, you should:

- Discontinue water use to prevent overflows and sewage backups into your home. Wait fifteen minutes before taking further action. A high level will sometimes cause the alarm to come on. This situation is often self-correcting and the tank will automatically be pumped down. Check the breaker in your home that controls the grinder pump panel control box. If the breaker is tripped, reset the breaker once. In the event the problem is either the breaker, and/or an electrical issue in the home, it is the homeowners' responsibility to retain a licensed electrician. (Note: The proper size breaker is 30 amps to run the pump.)
- If the alarm is sounding at the panel you may silence it by pushing the button located underneath the panel. The alarm will silence but you must still report the problem. The warning light will remain on.
- If fifteen minutes have passed and the alarm light is still on, or if you continue to get an alarm during the next few pump cycles, please contact the Town at:

905-468-3266 (Monday –Friday, 8:30a.m.–
4:30p.m.)

or at

905-468-3266 after normal business hours.

- Never attempt to open the tank cover.
- Blockages or pipe breaks that occur between the home and the pump housing and the property line are the responsibility of the homeowner. The Town is responsible from the property line out to the sewer main.
- If you observe an alarm, you should call for service. Do not ignore intermittent alarms. Intermittent alarms are a sign of pump wear and should be attended to promptly. Doing so may avoid more costly repairs at a later date.

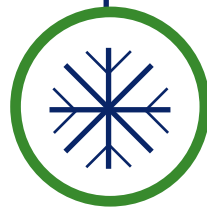
SPECIAL CONDITIONS

FREQUENTLY ASKED QUESTIONS

If a power failure affects your home, your grinder pump will also lose power and will not operate. The grinder pump tank has a small holding capacity, but interior water use should be severely limited until power is restored. The Town does not supply backup generator power during prolonged outages, and strongly recommends the homeowner have or acquire a backup generator to maintain function of the grinder pump.

People with Town water service will still have water during power outages. However, if the grinder pump is without power, water use during the outage can lead to overflows and sewage back up into the home, which is the homeowners' responsibility.

Power Failures



Storm Preparation

- Mark the pump housing before any large snow event.
- If you have a generator, make sure it is in working condition and has sufficient fuel available.
- Once the storm comes, try to clear your pump cover outside as this will reduce down time if an emergency repair is needed. If a repair is required it is the responsibility of the homeowner to clear a path to the pump. While you still have power run the water in your home until you hear the pump kick on. Once you hear the pump running shut off all water including laundry.
- You will now have an estimated 40 to 50 gallons of storage should you lose power.
- Monitor your system in storm events of extended duration.

What is a grinder pump?

A grinder pump is a submersible pump that collects wastewater from a building, grinds up the solids and pumps it to the sewer system through small diameter pipes.

A grinder pump may be required in one or multiple of the following circumstances:

A grinder pump may be needed if your community has:

- A low pressure sewer system
- Your home is located below grade from the sewer line and you need to pump uphill
- Your home is located far away from the sewer line and connecting by a gravity sewer line is not possible.

Is the grinder pump a replacement for a septic tank or other on-site treatment?

No, wastewater needs to be pumped to a sewer line or some form of treatment.

How does a grinder pump work?

All wastewater from a home (from toilets, sinks, dishwashers, washing machines, etc.) flows by gravity into the tank. When wastewater reaches a certain level, the pump turns on automatically and pumps the wastewater to the sewer main. As it pumps the wastewater, it draws through a grinding mechanism, turning it into a slurry. The pump will turn off automatically.

How do I know my grinder pump is (or not) working?

All grinder pumps come with an alarm panel. If your grinder pump is working properly, you shouldn't notice it at all the pump will turn on as needed and pump down the tank; its noise level is similar to that of a washing machine. The pump will turn off after a few minutes. If your pump stops working, the alarm panel's red light will blink and a buzzer will sound. If the alarm doesn't turn off after a few minutes, call for service.

How long will the pump run each day?

Typical operation is 10 to 30 minutes per day for single-family residential homes. It is designed to turn on several times throughout the day (20 to 40 times for a single-family home) for 1 to 2 minutes each time. Operation time varies based on water usage. The more water you use, the more often the pump will turn on.

How much electricity does the grinder pump use?

A typical single-family home uses approximately 250 gallons of water per day. An E/One pump will use between 9 and 20 kWh per month (60-240 kWh per year). Check with your utility bill for the cost per kilowatt-hour in your area. For example, if you pay 11 cents per kilowatt-hour: \$0.11kWh x 120kWh = \$13.00 per year cost of electricity to operate the E/One pump.

How long does the pump last?

The life expectancy of an E/One grinder pump is difficult to pinpoint. Many variables contribute to the life expectancy of a grinder pump, such as proper installation, system design, system pressure, run time, and what items go down the drain and into the pump. E/One grinder pumps have been known to last well over 20 years in some cases. The published average mean time between service calls is ten years.

Does my grinder pump need preventative maintenance?

No. The easiest way to keep your grinder pump operating correctly is carefully monitor what you put down the drain.

What can I flush with a grinder pump?

The only items that should be going down your drains are water, regular toilet paper, and human waste.

NEVER PUT ANY OF THE FOLLOWING MATERIALS INTO SINKS, TOILETS, OR DRAINS

- Glass, metal, wood and plastic, seafood shells
- Fish tank gravel, kitty litter
- Dental floss
- Diapers, baby wipes or general cleaning wipes, sanitary napkins or tampons
- Socks, rags, or cloth of any kind
- Any strong chemicals, toxic, caustic or poisonous substances
- Gasoline, kerosene, fuel oil, paint thinner, paint
- Antifreeze, lubricating oil or grease
- Cooking fat (lard, oil, grease)
- De-greasing solvents

Can I use drain cleaner if I have a grinder pump?

Drain cleaner can be used, but choose carefully: use a household (not industrial strength) drain cleaner and follow the instructions on the bottle. Then flush enough water to ensure that the pump turns on, so the pump isn't sitting in the chemical for any period of time.

Why is my grinder pump alarm going off? What does the red light on the grinder pump mean?

The alarm on your grinder pump station will sound when the wastewater in the tank reaches a certain level ("alarm level"). An alarm may occur if a large amount of water goes into the tank and rises above the pump's alarm level, such as emptying a large whirlpool bathtub. After the pump "catches up," the alarm turns off itself and does not turn on again. The manufacturer calls this a "nuisance alarm." Frequent nuisance alarms during normal water usage (showers, washing machine, etc.) may indicate that the pump is having trouble "keeping up" with pumping and needs service.

A nuisance alarm may also occur after a power outage: wastewater may be above the pump's alarm level, and the pump needs a few minutes to pump down the tank to a normal level. If the alarm doesn't turn off, call for service.

An alarm will occur if the pump has stopped working and wastewater in the tank rises above the pump's alarm level. Discontinue water use to avoid causing a backup or overflow. Never silence the alarm and continue using water if your pump is not working; you will cause a backup or overflow and possibly damage the pump.

What should I do if the alarm on my grinder pump goes off or the grinder pump red light stays on?

If the alarm turns off after a few minutes and does not turn on again, the grinder pump should be ok. Check regularly to ensure that the grinder pump is operating and the alarm is not on. If the alarm turns on and off repeatedly or turns on and stays on, call an authorized centre for service or call Service line warranties of Canada (if you have warranty coverage).

IMPORTANT LINKS

Town of Niagara-on-the-Lake
Website *www.notl.com*

E-One Maintenance Guide
eone.com

Service Line Warranties of Canada
servicelinewarranties.ca

Contact Information

Town of Niagara-on-the-Lake

Website: www.notl.com

Phone Number:

905-468-3266

Monday-Friday, 8:30 a.m.- 4:30 p.m.

After hours: 905-468-3266

Service Line Warranties of Canada

Website: servicelinewarranties.ca

Customer service: 1-866-922-9004

E-One Environment One Corporation

Website: eone.com

In the Event of an Emergency

If you have warranty coverage with Service Line Warranties, contact them and they will setup repairs through their service.

Roto-Rooter

905-687-3900