In Conclusion…

In locations that present physical constraints on traditional septic or sewage handling systems, grinder pumps can provide an economical means of wastewater handling.

Today, more than ever, we are building on land that has more difficult terrain, and grinder pumps are being used to service sewer systems in these areas.

A new grinder pump system can be expected to provide years of reliable service, with low operating and maintenance costs.

When you have a difficult application, consider using a grinder pump!

For more information about pressurized sewer systems and grinder pumps, refer to the Sump and Sewage Pump Manufacturers Association (SSPMA) web site at www.sspma.org where you can find troubleshooting tips, pump maintenance information, links to individual manufacturer members' web sites and other helpful publications and information.

Sump and Sewage Pump Manufacturers Association
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The Homeowner's Solution For Handling Residential Sewage In Challenging Locations

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In the late 1950s and early 1960s, families migrating from inner cities to the suburbs to build new homes faced a new challenge… handling their sewage. Many subdivisions were located outside of existing municipal sewer systems. Often, the most desirable lots presented physical constraints on traditional septic or sewage handling systems. Some of these constraints were: waterfront locations, hilly terrain, high water tables, and extreme cold weather areas. Other possible constraints were: areas where soil conditions resulted in septic system bans or gravity sewers could not be physically, or economically, reached.

Those constraints resulted in new demands for alternative home sewage systems. Those demands resulted in the development of pressurized sewer systems to handle wastewater for communities, single residences or in light commercial applications. Many of these pressure systems were serviced with grinder pumps.

Grinder Pumps are used to pressurize small diameter plastic lines in areas where large gravity lines are impractical or uneconomical. Discharge points may be existing gravity sewer mains, large pump lift stations or direct to central treatment systems.

All that's needed in this type of system is a grinder pump or pumps, a pump station to collect residential sewage, a control panel to turn the pump on and off, some small diameter plastic pipe and a small trencher.

Grinder pumps can actually reduce infrastructure costs. Since these pumps cut large solids into smaller particles and pump at higher pressures, residential sewage can be pumped through smaller diameter pipes to greater elevations and longer distances.

Two Distinct Grinder Pump Products

A *Centrifugal Grinder* pump uses an impeller spinning on a shaft powered by a motor to create the pumping action. Wastewater is pumped through the cutters that grind, shred or cut the material that is being pumped out of the basin. Centrifugal Grinders are typically used in applications that require lower discharge heights above pumping level (less than 90 feet).

A *Semi-Positive Displacement Grinder* is powered by a motor turning a stainless steel screw-type rotor that spins inside a rubber stator that creates a pumping action. This type of Grinder pump allows for higher pumping heights as the material is squeezed inside the rubber stator pumping the wastewater through the pump and out of the basin. Semi-Positive Displacement Grinders are typically used in applications that require higher discharge heights above pumping level (greater than 90 feet).

Grinder Costs

1. **Installation** – A residential grinder system's installation cost depends on the type of equipment required, the soil conditions, and the distance to the sewage treatment facility. A typical residential grinder package can cost from $5,000 to $10,000 installed.
2. **Maintenance** – Maintenance costs for grinder pump systems are minimal due to the reliability of these systems. The maintenance cost may be included in the homeowner's monthly sewerage fee if the grinder systems are managed by the public utility or a contracted service provider for the public utility.
3. **Operation** – Because the actual time the grinder pump operates during the course of a day is probably no more than 15 to 20 minutes, the amount of electricity used is very low. Estimates range from $3.00 to $5.00 per month depending upon the charge per kilowatt-hour.