

Features of the Kovarik Anaerobe Pumping System



THE KAPS SYSTEM OFFERS SUBSTANTIAL SAVINGS

The pressured system will allow the site engineer to save time and money, unlike gravity systems where land surveys are time-consuming and costly to ensure the slope of gravity sewer lines. The KAPS pressurized system will allow the community to use small diameter piping to be laid to follow close to the contours of the land.

CONTROLS - ELECTRICAL

The KAPS system is controlled by simple, high quality Mercury or Mechanical Floats. Quick disconnect piggy back plugs eliminates the need for hard wiring. The pump or alarm can be easily removed for repairs. Internal wiring is complete from the factory.

EMERGENCY CONSIDERATIONS

When using a recommended 1000 gallon collector tank, the control settings can allow for emergency storage space should a need arise due to power or mechanical failures.

PIPING

The main piping is rigid stainless steel, coordinated with Hydraulic flex hose with pressed on zink coated fittings for ease of alignment and maintenance when needed. The piping runs through the vault via sealed bulk heads. The flexible piping is connected to the pump with swivel fittings for easy pump removal.

ECONOMIC AND ENGINEERING BONUS

Incorporated into the design scheme of the KAPS system is the high head pump with optional automatic pressure relief valve which will form a by pass when opened by pressure. This valve is capable of controlling pressures at each site. The result is a drastically reduced peak design flow factor & smaller, less expensive sewer mains.

Marketed by:

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For further information, or answers to
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VINCENT J. KOVARIK

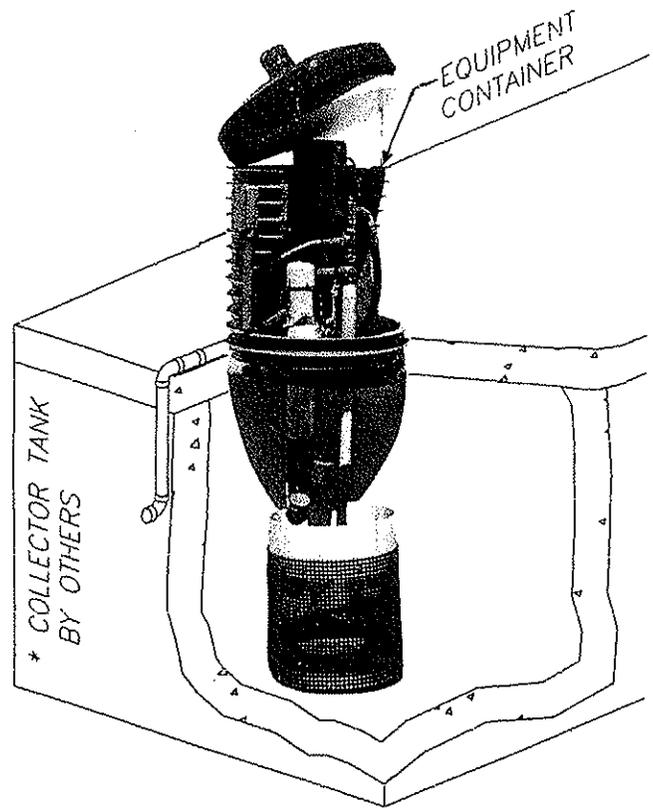
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Stone Gate Development Co. • Kovarik Anaerobe Systems



**ANAEROBE
SEWAGE PUMPING
AND**

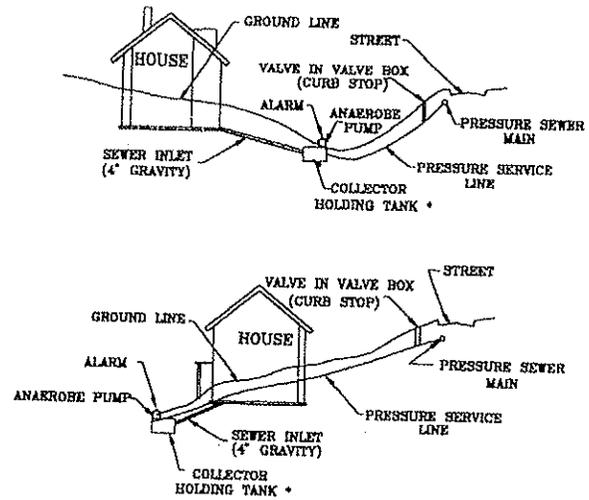
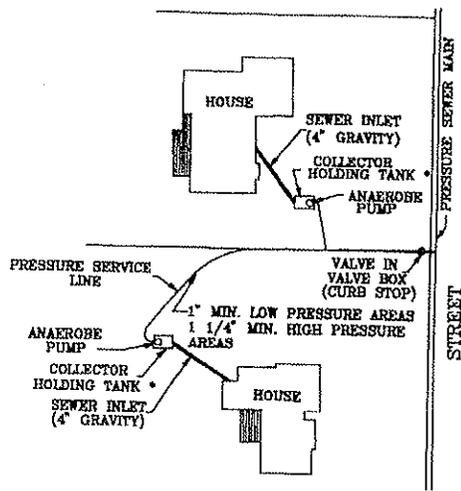
**PRIMARY TREATMENT SYSTEM
SOLVES MANY PROBLEMS**



All components easily replaced in minutes

- ◆ *Over 30 years of proven service.*
- ◆ *Operating costs run only pennies per day.*
- ◆ *Primary treatment of sewage to help effect biodegradable solid reduction.*
- ◆ *Permits use of 1" to 1 1/4" pipe from the collector-holding tank to the discharge point.*
- ◆ *Replaces expensive & large diameter gravity piping and manholes with small diameter lines easily laid in shallow trenches.*
- ◆ *Sewage can be pumped for miles when pressures do not exceed 150 PSI.*
- ◆ *Ideal for small commercial and subdivision projects, summer or week-end homes, difficult terrain situations and developments near existing municipal collection lines.*
- ◆ *Designed to provide up to 48 hours of standby storage should a power failure occur. This system is very easy to maintain.*
- ◆ *Saves our Natural Environment. You will not need to strip the trees, or level our beautiful hills when the KAPS System is used.*

**AN EXCELLENT ANSWER TO
MANY TROUBLESOME
SEWAGE DISPOSAL CONDITIONS**



The primary treatment chamber for a single family residence is simply a collector-holding tank, usually a 1000 to 1200 gallon tank (furnished by others). This collector-holding tank is designed to give minimal treatment to help effect reduction of biodegradable solids, to reduce nitrates and phosphates, and allow for some decomposition of greases. A partially biodegraded mixed liquor is created within this tank for easy pumping to the advanced or conventional treatment facility, or main sewer line. After partial breakdown of the solids occurs, the mixed liquor sewage is directed to the pump intake thorough the screening of the wet well an pumped to an advanced or conventional treatment facility, or leach field.

Size of the collector-holding chamber depends upon the number of occupants using the system. The tank could be sized to allow a minimum of 24 hours standby time in case of emergency and peak flow design consideration. This will allow the user to continue to use water during a system or power failure.

When installing the wet well within the collector-holding tank, the screen is placed on the bottom of the tank. The wet well then slides into the coupling flange which is connected to the bottom of the equipment

container to be sealed in place by others.

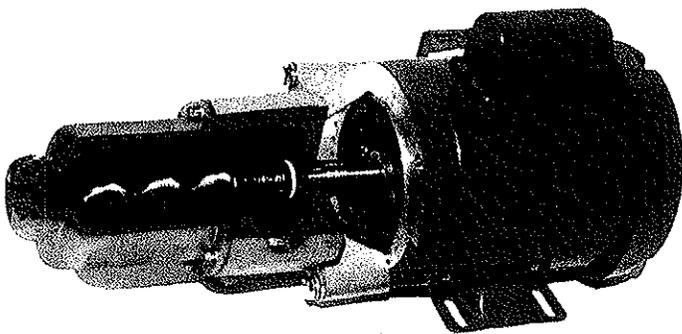
The anaerobe pump is a progressing cavity positive displacement pump, which is unique because there are no valves, pistons, diaphragms, and no high speed impellers to wear out. Yet this pump will pump effluent and pass small solids with very little wear on the pumping components. A single thread-like rotor acts as a screw type conveyor, turning within a double-thread, pliable rubber stator. The pumping elements form pockets which move towards the discharge end of the pump, carrying the fluid being handled. The result is like that of a piston moving through a cylinder of infinite length. Pumping action is smooth and turbulence-free, providing continuous, uniform flow. The pump is self priming, and will pump small solids that may occur.

Pump construction is Alloyed Cast Iron, Stainless steel rotor with hardened finish, Buna "N" Stator. The motor is standard NEMA 56C FRAME, 1/3 or 1/2 hp, 1725 RPM.

The standard anaerobe pump with the 1/2 HP motor is capable of pumping to a maximum head of 150 PSI; with a 1/3 HP motor, the maximum head is 50 PSI.

KAPS 2100

Progressing Cavity Pumps

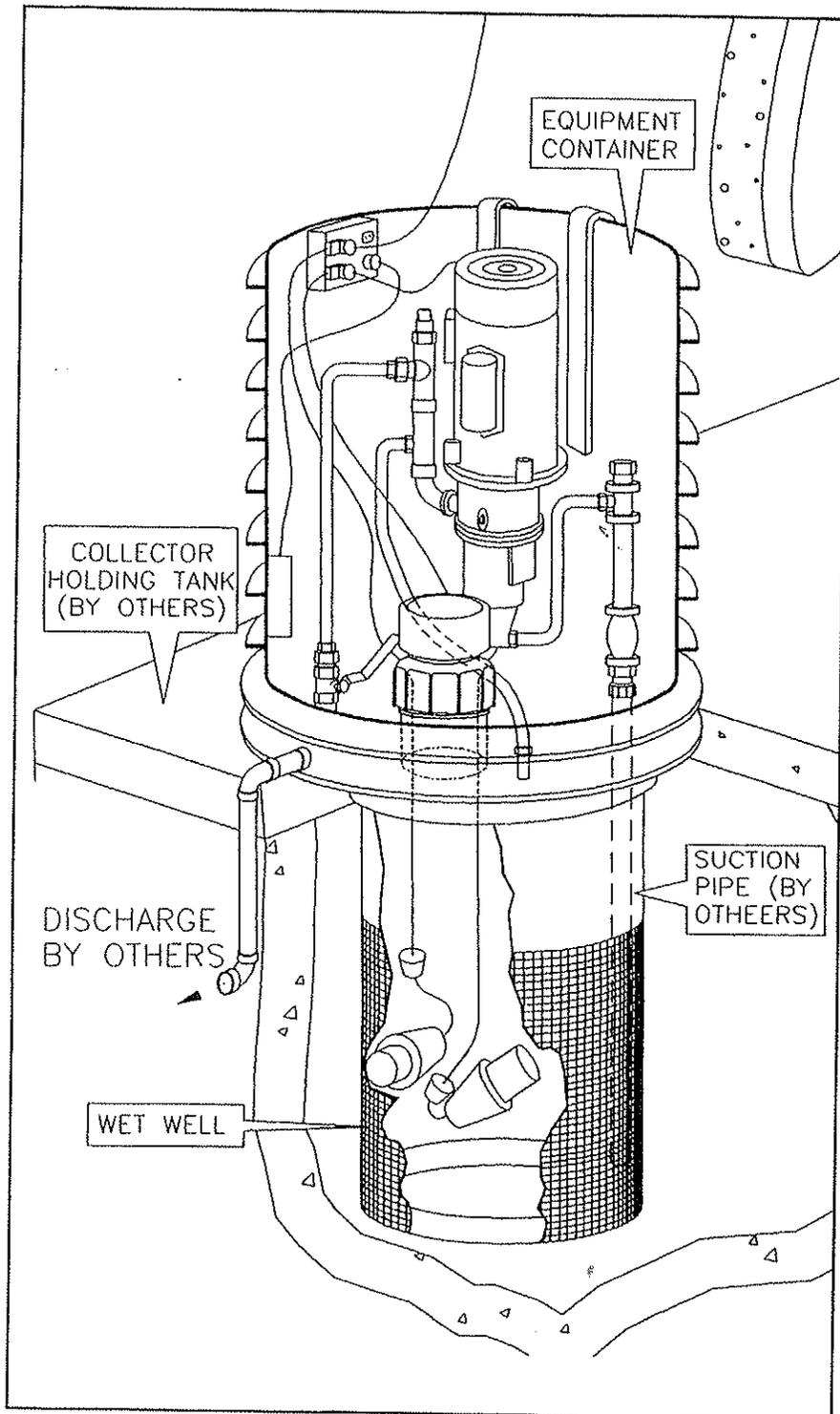


Head in Feet	Performance PSI	Gallons Per Minute	Gallons Per Hour
0	0	9.4	564
58	25	7.0	420
115	50	4.2	252
174	75	3.5	210
231	100	2.0	120
346	150	0.5	30

By Kovarik Anaerobe Systems Inc. Over 30 years of experience in progressing cavity pumps.

THE KOVARIK ANAEROBE PRINCIPLE

This system is unique and exceptionally easy to maintain. It is based on these concepts; Primary biological treatment, which reduces solids and allows for inexpensive conveyance of partially treated sewage and solids. Results are the ability to use small diameter piping with less costly installation of lines where gravity flow is nearly impossible. The pump system is revolutionary in design, yet simple and economical to operate with only four moving part's. This design is the maintenance person's dream because all components are easily removed. The system is designed to provide up to 48 hours of emergency storage in the collector tank.



WHERE THE KAPS ANAEROBE SYSTEM CAN BE MOST EFFECTIVE

This system is ideally suited in extreme hilly or flat terrain areas, high water conditions and when bed rock is encountered. The system is extremely feasible in low density subdivision and in subdivisions which have a low build out rate (such as recreational or weekend home areas). It is the ideal answer to solve the sewage transportation problems in areas around large lake and areas nestled in mountainous terrain.

EXCELLENT ANSWER TO MANY SEWAGE TRANSPORTATION APPLICATIONS

The system is a great design choice where gravity sewer lines cannot be constructed to avoid rocky conditions and when there is a need for major lift stations. It's also a great choice to send the effluent from septic or aeration tanks into elevated on-site drain fields.

HOW THE KAPS ANAEROBE SYSTEM WORKS

The sewage flows by gravity from the source to the collector-holding tank and wet well. This tank acts as a collector and primary treatment chamber. Suspended inside the wet well is the suction lift to the anaerobe pump, and the liquid level probes.