



Geotech 3.5 Reclaimer

Installation and Operation Manual



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DOCUMENTATION CONVENTIONS

This manual uses the following conventions to present information:



An exclamation point icon indicates a **WARNING** of a situation or condition that could lead to personal injury or death. You should not proceed until you read and thoroughly understand the **WARNING** message.

WARNING



A raised hand icon indicates **CAUTION** information that relates to a situation or condition that could lead to equipment malfunction or damage. You should not proceed until you read and thoroughly understand the **CAUTION** message.

CAUTION



A note icon indicates **NOTE** information. Notes provide additional or supplementary information about an activity or concept.

NOTE

Chapter 1: System Description

Function and Theory

The Geotech Reclaimer configured as a Top fill, Bottom fill, or Top & Bottom fill is a fixed intake, positive air displacement pump designed for total fluids, hydrocarbon, leachate, and condensate recovery. The Geotech Reclaimer is designed to withstand the most aggressive down well environments including highly corrosive fluids without material breakdown or failure.



The Geotech Reclaimer will recover fluids from depths to 690'. See operation section.

Flow rates of up to 15.5 GPM are possible. See specifications section.

The Geotech 3.5" Reclaimer will operate in wells 4" in diameter or larger vertical wells.

System Components

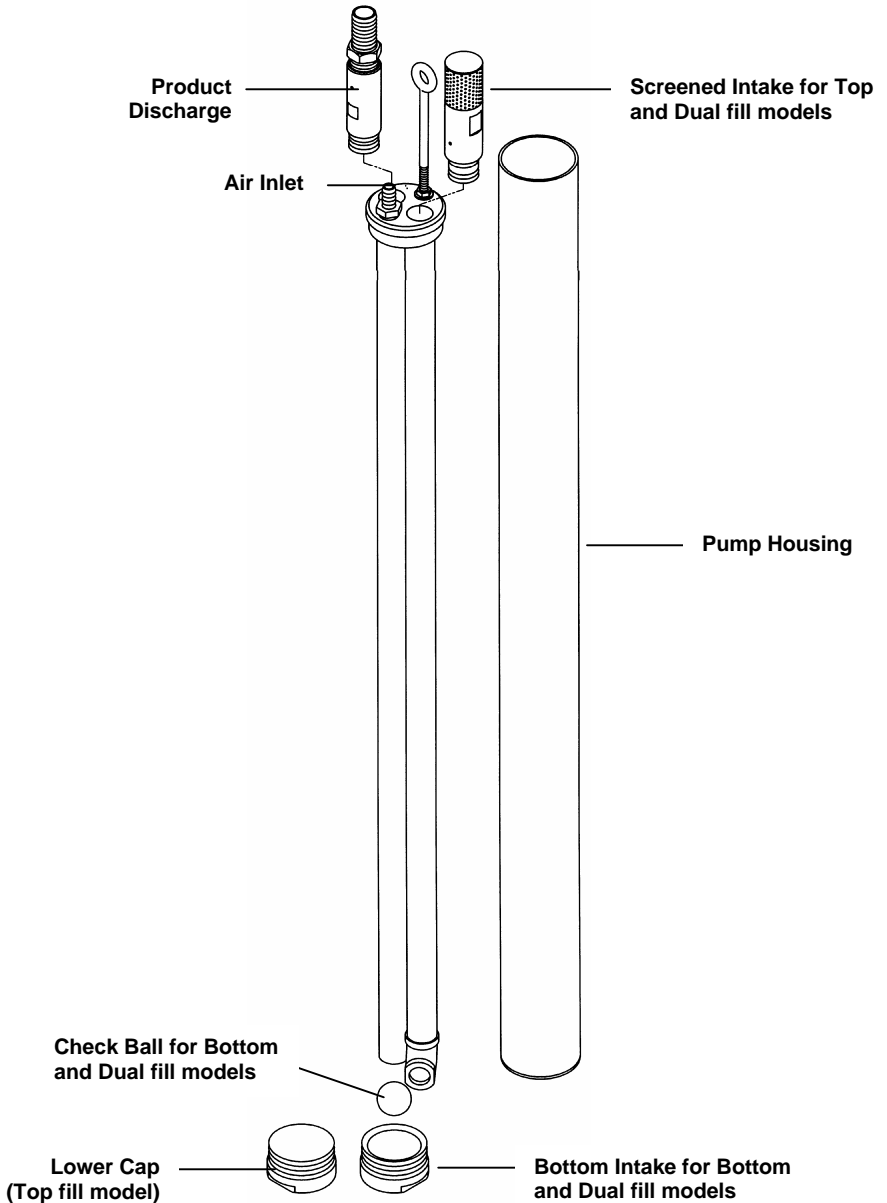


Figure 1

Chapter 2: System Installation

Attach product discharge & air supply hoses to the proper barbed fittings on the pump.



If pump configuration was not assembled as a complete system, please use the following steps:

- Attach air supply hose to Geotech pneumatic controller.
- Ensure all hoses are installed securely and completely.
- Attach safety cable to support loop using crimps or cable clamps.

The Reclaimer can now be lowered into the recovery well. For optimum efficiency, the Reclaimer must be positioned in the well according to intake configuration. See figures 2 and 3.

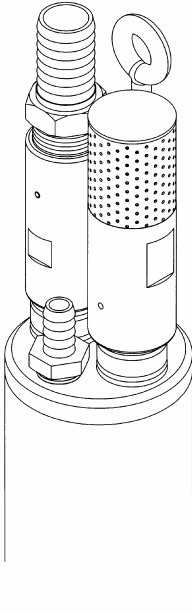


Figure 2 - 3.5" Top Fill

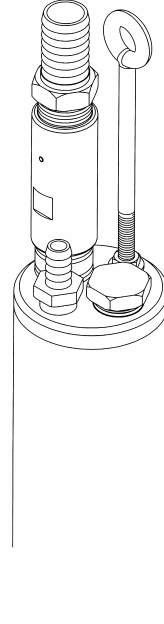


Figure 3 - 3.5" Bottom Fill

Chapter 3: System Operation



Compressed air is utilized in this system. Typically .5 to 1.0 cubic foot of air is necessary per gallon of liquid being pumped. For pressure requirements use .5 psi per foot of lift plus ten. Example 30' of head would need a minimum of 25 psi.

TOP FILL

The Reclaimer is placed in a recovery well with the top inlet submerged well below static groundwater. Combined with the Geotech Pneumatic Controller, the Reclaimer cyclically fills and empties.



Well recharge rate and time sequence settings on the Geotech Pneumatic Controller will affect the maintainable fluid level. See specifications section for max. flow rate.

BOTTOM FILL

The Bottom Fill Reclaimer is placed in a recovery well with the bottom intake submerged well below static groundwater. Combined with Geotech's Pneumatic Controller, the Reclaimer cyclically fills and empties.



Well recharge rate and time sequence settings on the Geotech Pneumatic Controller will affect the maintainable fluid level, see figure 4.

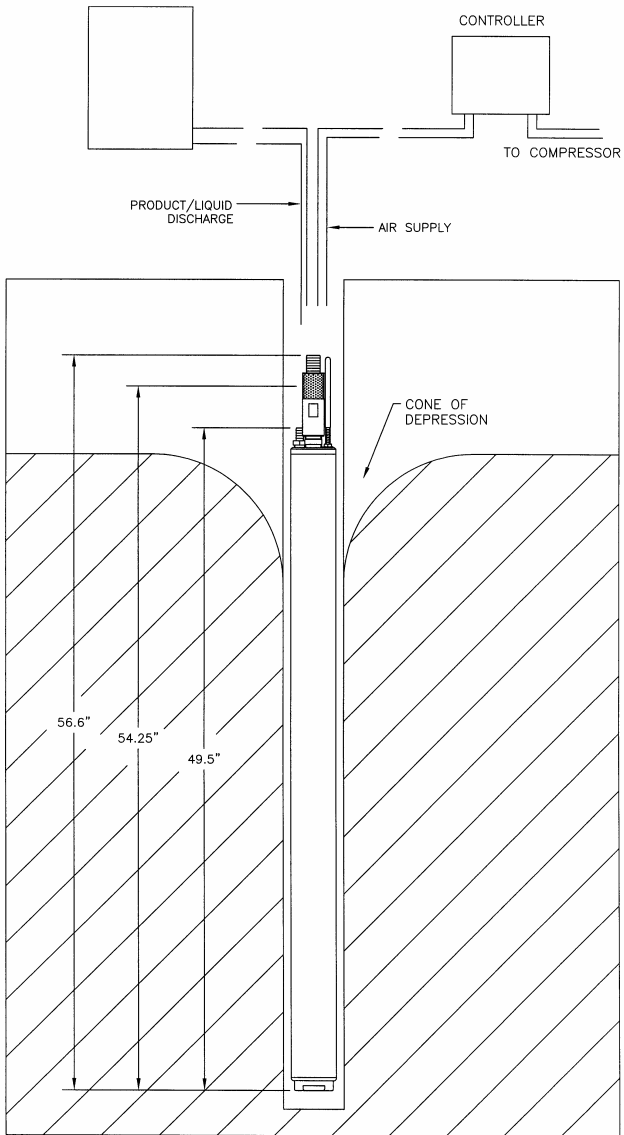


Figure 4 – 3.5" Reclaimer

Chapter 4: System Maintenance

Dependant upon the fluids being pumped, the Geotech Reclaimer has been designed to be virtually maintenance free. In the event of clogging of the pump housing or trapped particulate in the check ball seats, use a high pressure washer with soapy or clean water to dislodge any matter. All wetted materials are 300 series stainless steel and should provide many years of maintenance free service. See figure 5.

Top Fill

Bottom Fill

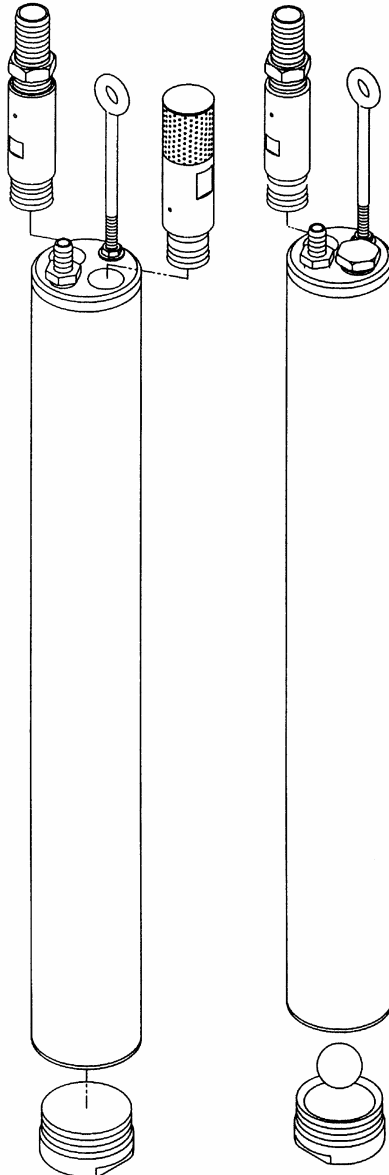


Figure 5
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Chapter 5: System Troubleshooting

PROBLEM: Pump does not discharge fluid to the surface.

SOLUTIONS:

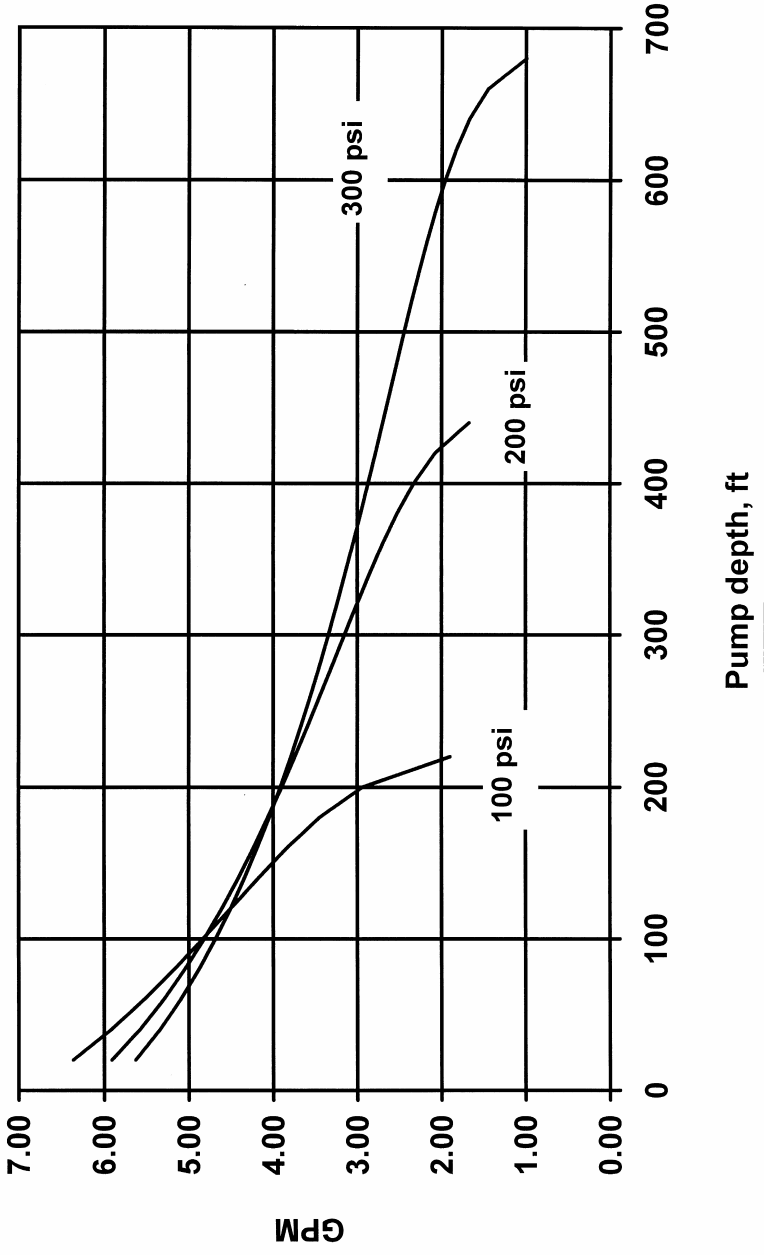
1. Ensure air pressure is adequate enough. (See specifications section, min operating pressure example: .43 psi per ft. of static head pressure)
2. Inlet screen is clogged – Clean screen
3. Inlet pipe plug is clogged – Clear, Clean plug
4. Air exhaust vent hose is clogged – Clear vent hose
5. Hoses are kinked or cut – Replace hoses

Chapter 6: System Specifications

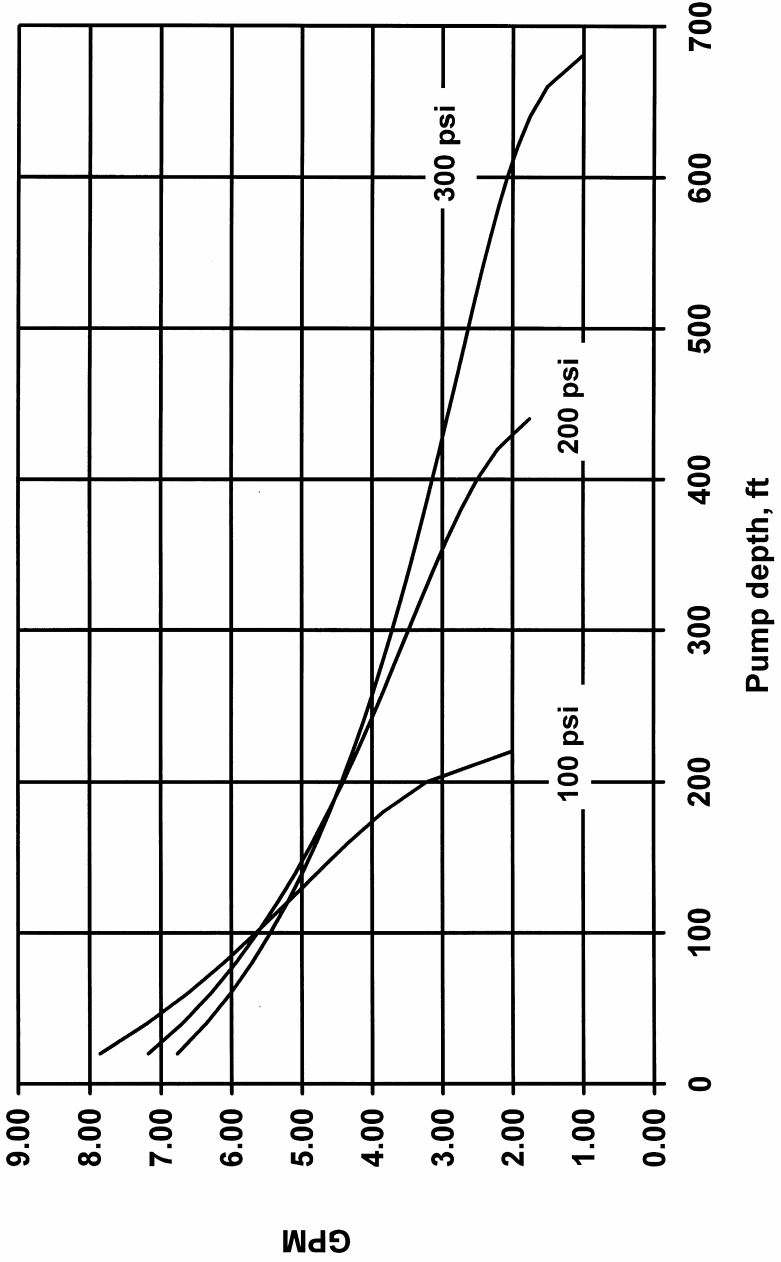
3.5" Reclaimer

Outside Diameter	3.5"
Length	59"
Weight	38 lbs
Max. Rate Depth	690'
Min. Well ID	4"
Operating Pressure Range	10-300 psi
Volume/Cycle	1.10 gal
Max. Flowrate	15.50 gpm.
Fittings	Stainless Steel
Fluid Discharge	1"
Air Supply	.50"
Min. Operating Pressure	10 psi

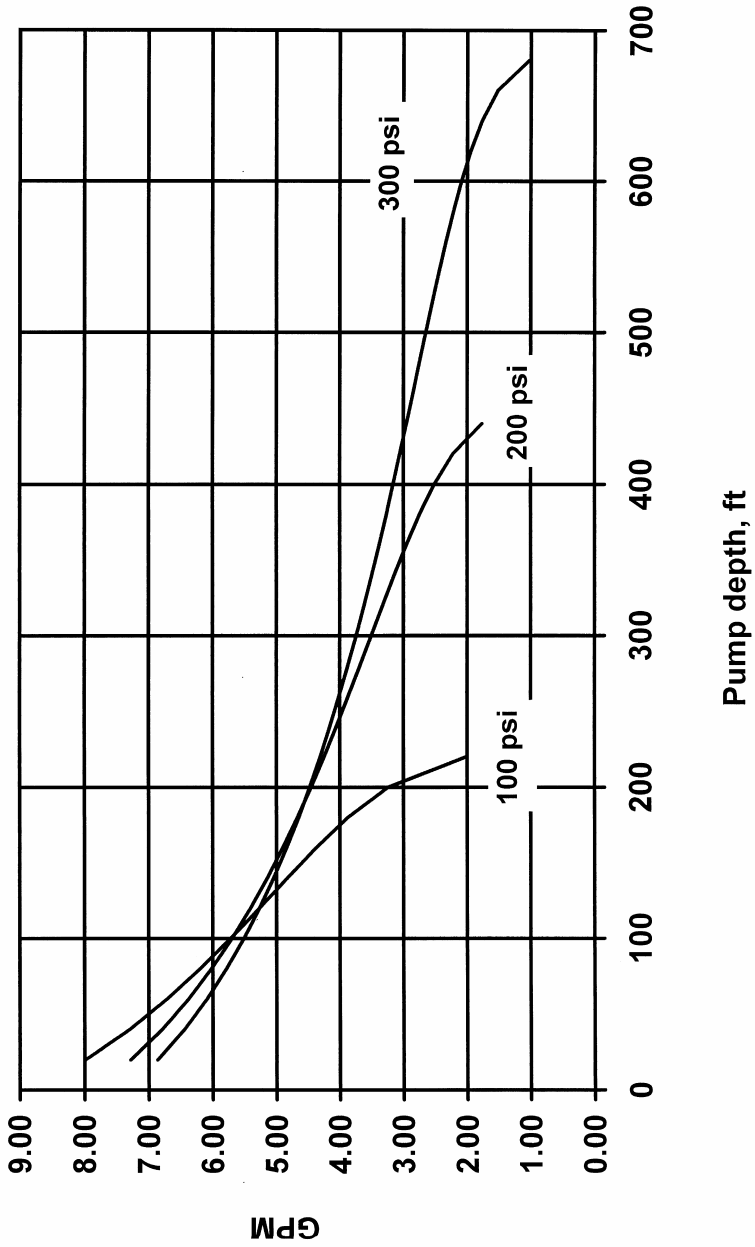
3.5 Reclaimer Top Fill Recovery Rate



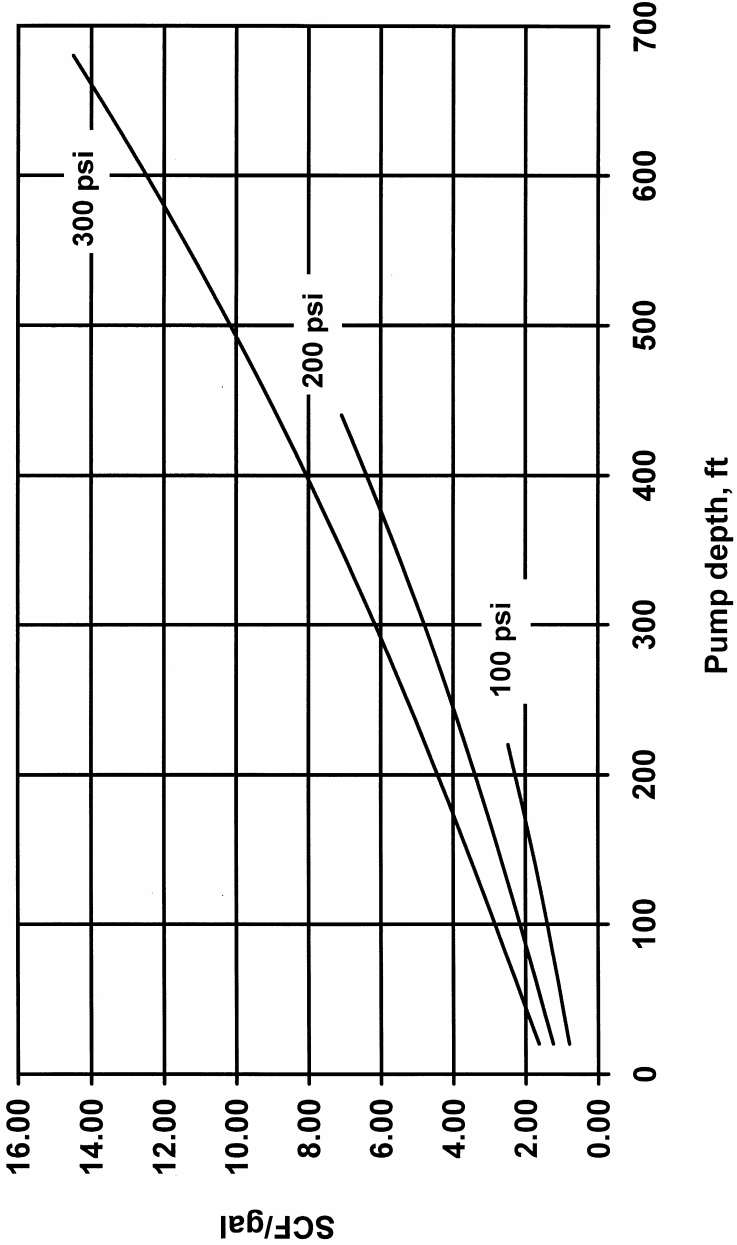
3.5 Reclaimer Bottom Fill Recovery Rate



3.5 Reclaimer Dual fill Recovery Rate

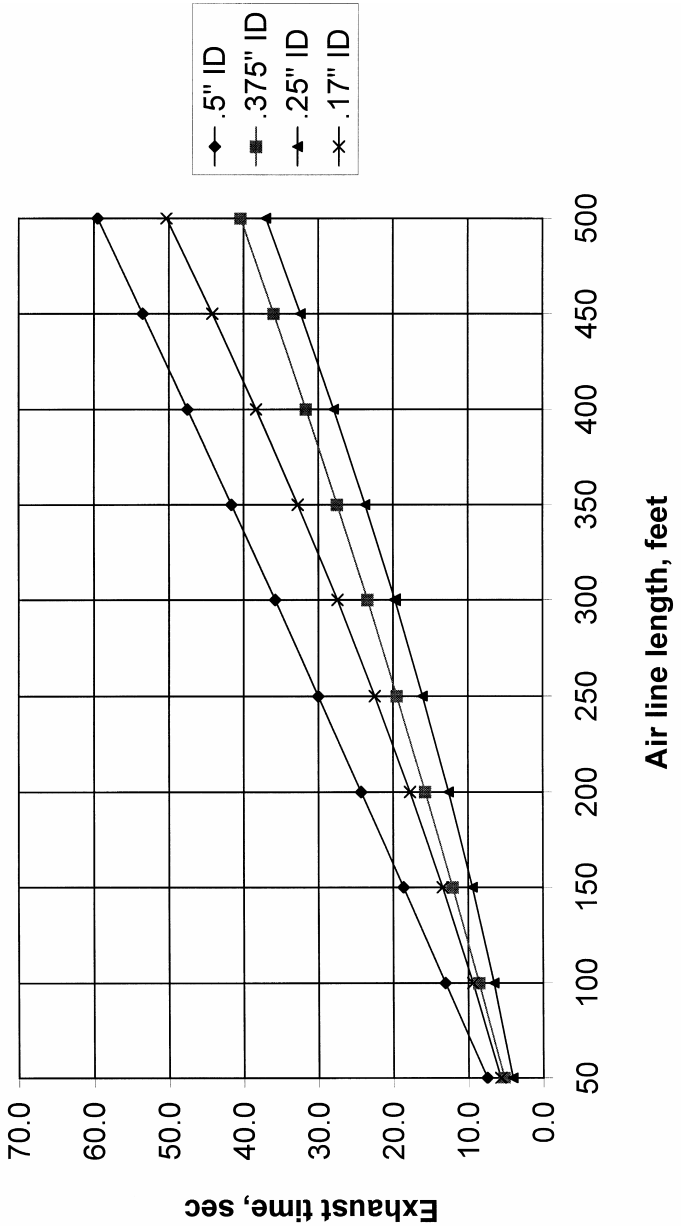


3.5 Reclaimer Air Consumption



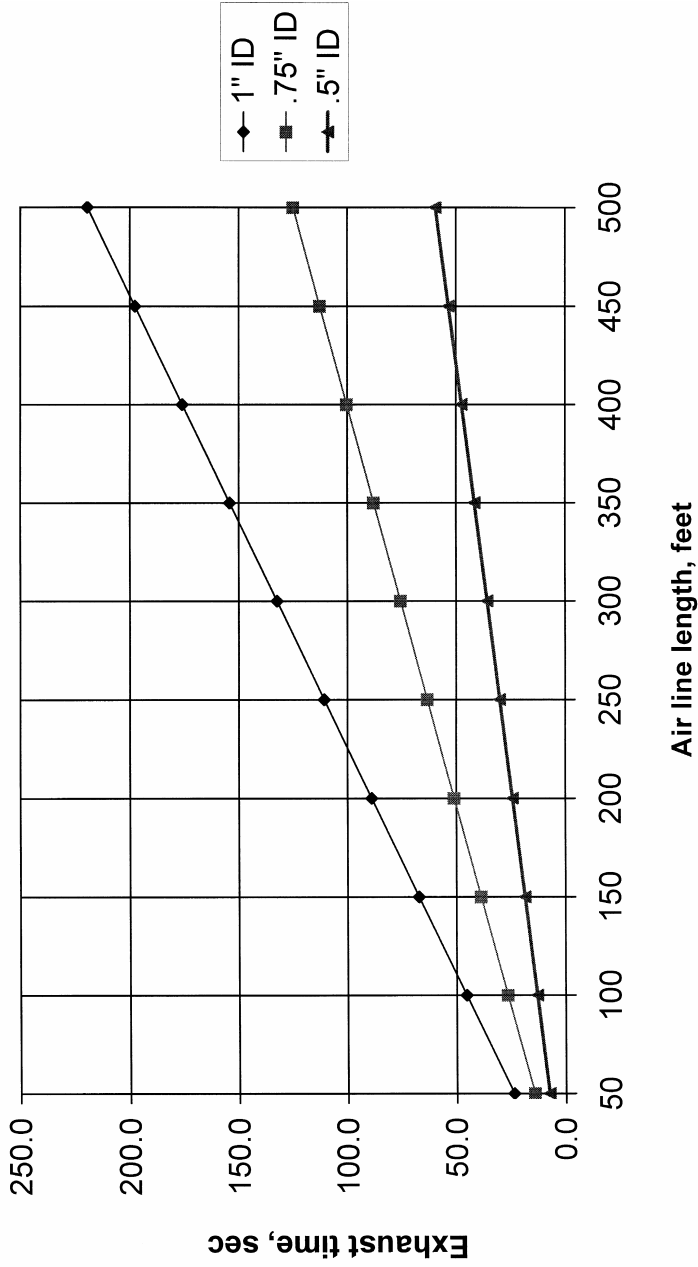


PRS controller, exhaust times for different air line ID and lengths, 20' submergence

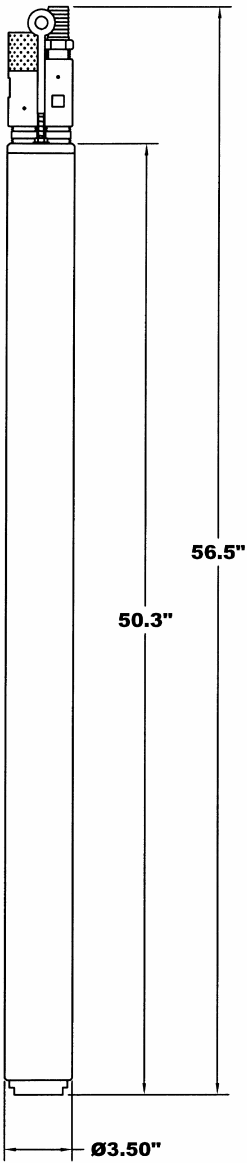


These graphs are specific to the Geotech PRS Controller.

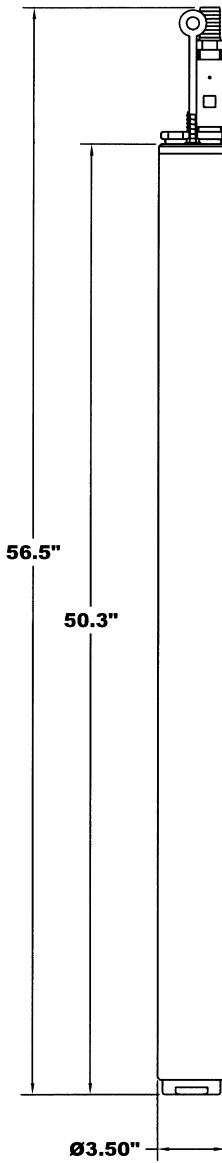
PRS controller, exhaust times for different air line ID and lengths, 20' submergence



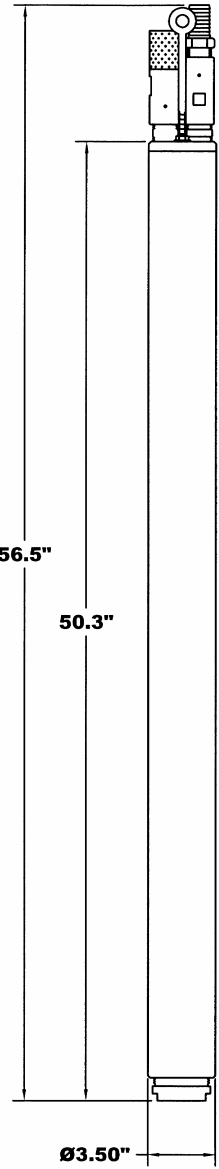
Chapter 7: System Schematic



Top Fill



Bottom Fill



Dual Fill

Chapter 8: Replacement Parts List

26600050	Cap, Upper
26600059	Pipe, Intake, 43.75" LG
17200330	Union
56600024	Assy, Intake Screen
26600051	Tube, Housing, 48"
26600060	Cap, Lower, Plug
26600055	Pin, Hanger
26600052	Pipe, Discharge, 44.5" LG
56600023	Assy, Valve, Check, Inline
16600117	Hose Barb
17500104	O-Ring
77051004	Safety Cable
17200098	Crimp, Oval Sleeve
17200043	Nut, Hex
16600145	Hose Barb

Notes

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The Warranty

For a period of one (1) year from date of first sale, product is warranted to be free from defects in materials and workmanship. Geotech agrees to repair or replace, at Geotech's option, the portion proving defective, or at our option to refund the purchase price thereof. Geotech will have no warranty obligation if the product is subjected to abnormal operating conditions, accident, abuse, misuse, unauthorized modification, alteration, repair, or replacement of wear parts. User assumes all other risk, if any, including the risk of injury, loss, or damage, direct or consequential, arising out of the use, misuse, or inability to use this product. User agrees to use, maintain and install product in accordance with recommendations and instructions. User is responsible for transportation charges connected to the repair or replacement of product under this warranty.

Equipment Return Policy

A Return Material Authorization number (RMA #) is required prior to return of any equipment to our facilities, please call our 800 number for appropriate location. An RMA # will be issued upon receipt of your request to return equipment, which should include reasons for the return. Your return shipment to us must have this RMA # clearly marked on the outside of the package. Proof of date of purchase is required for processing of all warranty requests.

This policy applies to both equipment sales and repair orders.

**FOR A RETURN MATERIAL AUTHORIZATION, PLEASE CALL OUR
SERVICE DEPARTMENT AT 1-800-833-7958 OR 1-800-275-5325.**

Model Number: _____

Serial Number: _____

Date: _____

Equipment Decontamination

Prior to return, all equipment must be thoroughly cleaned and decontaminated. Please make note on RMA form, the use of equipment, contaminants equipment was exposed to, and decontamination solutions/methods used.

Geotech reserves the right to refuse any equipment not properly decontaminated. Geotech may also choose to decontaminate equipment for a fee, which will be applied to the repair order invoice.

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