

2.4 Liter Barrel Filter

Instruction Manual



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DOCUMENTATION CONVENTIONS

This manual uses the following conventions to present information:



WARNING

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.



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.



NOTE

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

Chapter 1: System Installation/Assembly

A fully assembled Barrel filter unit comes with 3 tripod legs to hold the unit off the surface so the sample container can be fitted underneath it.

To prepare your unit for use: Rest unit on the 3 aluminum stand off legs so the bottom of unit can be removed. Remove bottom of unit to set up or change the membrane filter.



Always release air pressure from unit before disassembly.

Unscrew the three swing-a-way nuts, loosening only enough to slide the bolt assembly off of the acrylic plate. Take bottom plate and set it aside. With the unit still upside down, fill the cylinder with a measured amount of water to be filtered.



It is suggested that the amount to be filtered not exceed 2 liters for best performance.

Carefully pour directly into the cylinder. Do not pour around lip where the o-ring and filter paper rest. Reassemble the unit in the order that follows (see figure 1).

- A. O-ring
- B. Pre-filter (if used)
- C. Membrane filter
- D. Filter support screen

The polycarbonate pop-out center will stay in the bottom plate. Replace the bottom plate of unit carefully so as not to disturb centering of screen, filters, and O-ring. Once unit is aligned, slide swing-a-way bolt assemblies into place and tighten. Make sure that care is taken in tightening bolts evenly by tightening each assembly a little in turn until all the swing-a-way bolt assemblies are “finger tight” only.

Chapter 2: System Operation

Connect a pressure bulb, air pump or nitrogen bottle (with regulator not to exceed 30 psi) to unit and slowly increase the pressure.



Although each unit has been pressure tested to 60 psi personal safety demands that actual operating pressure **NEVER EXCEEDS 30 psi.**

Ordinarily, samples will filter quickly at much lower than the maximum pressure of 30 psi. It will seldom be necessary to apply pressure in excess of 20 psi. If a filter becomes clogged with residue and filtration rate slows to a trickle, release the pressure and replace the clogged filter with a new filter membrane. Do not increase pressure when slower filtration rates are due to clogged membranes.

Chapter 3: System Maintenance

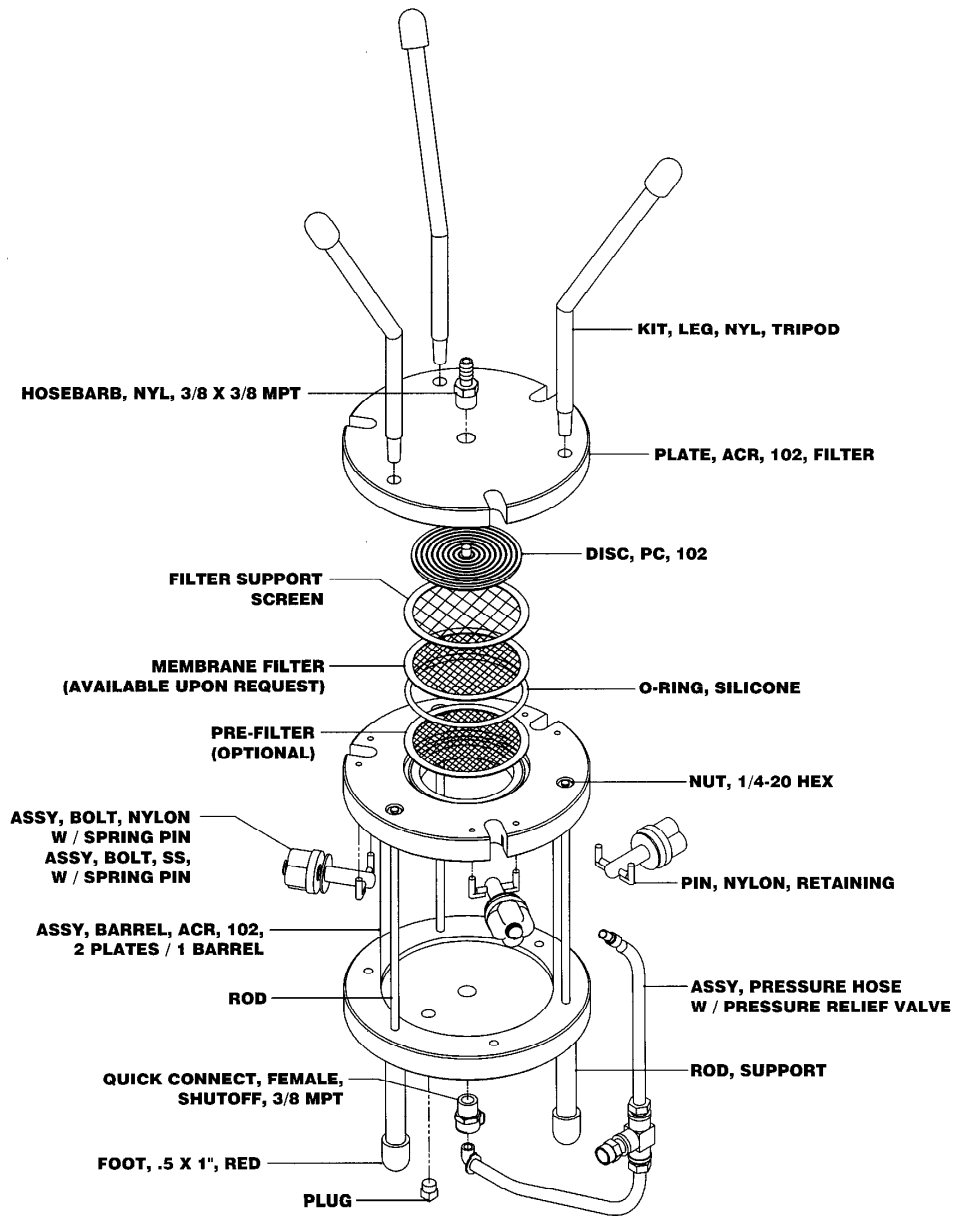
Acrylic is a moderately soft plastic material and is easily scratched. Therefore, reasonable care should be used in handling and cleaning the filter unit. Abrasive cleaners should not be used and all sediment residues should be removed immediately by flushing and thorough rinsing. Organic solvents which attack the plastic must be avoided. Mild detergent solutions or dilute mineral acids may be used without damage to the filter unit. With proper treatment, the unit will give long and satisfactory service.

1. Discard the first 150 - 200 mL of filtrate passing through each fresh filter.
2. The air valve in the pressure hose serves as a check valve, a pressure relief valve and as a convenient means of connecting the pump to the filter unit. Whatever means is used to apply pressure to the filter unit, a check valve is required to maintain pressure and a relief valve is a great convenience in lowering the pressure within the unit before disassembly.

Chapter 4: System Specifications

Membrane filter size	102 mm
Pre-filter size	90 mm
Material of construction	acrylic
Pressure relief valve setting	35 psi.
Fitting size	3/8 pipe
Fitting material	polyethylene
Pop-out center	polycarbonate
Swing-a-way nut & bolt assembly	polycarbonate or stainless steel

Chapter 5: Replacement Parts List



Part Number Part Description

17200038	Hosebarb, Nyl, 3/8 x 3/8 MPT
13150016	Filter Support Screen
53150017	Assy, bolt, nylon
53150015	Assy, bolt SS w/ spring pin
53150014	Assy, Barrel, ACR, 102, 2 plates/1 Barrel
23150031	Rod
17500005	Quick Connect, Female, Shutoff, 3/8 MPT
13150010	Foot, .5 x 1", Red
17200050	Plug
57500005	Kit, Leg, Nyl, Tripod
23150005	Plate, ACR, 102, Filter
13150006	Disc, PC, 102
17500014	O-Ring, Silicone
17200043	Nut, 1/4 -20 Hex
83150011	Pin, Nylon, Retaining (pack of 12)
53150005	Assy, Pressure hose w/pressure relief valve
23150030	Rod, Support

Accessories

Part Number Part Description

87500002	Pump, Hand, Metal, w/5' tubing
87500001	Pump, Hand, Plastic, w/5' tubing

Filters and Pre-filters

Part Number Part Description

83100003	Filter, CA, .45µm, 102 mm, pk 100
83100016	Filter, CN, .45µm, 102 mm, pk 100
83100024	Pre-filter, Glass Fiber, 102 mm, Type 28 pk 100

Notes

Notes

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 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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