Manning
ENVIRONMENTAL INC.

MSP250
Manual
Sampling Pump

Operation Manual

MSP250 Manual Sampling Pump Operation:

1. Connect battery by sliding connector on red wire onto positive (red) battery post. Slide connector on black wire onto negative (black) battery post.
2. Close case and latches.
3. Place intake hose in source fluid.
4. Place discharge hose in sample container.
5. To take a sample, push switch upward (toward “draw”). To purge (reverse the pump), push switch downward (toward “purge”).
6. Return switch to the center “off” position to stop pump.

Warnings:

1. **DISCONNECT BATTERY BEFORE REMOVING CLEAR PUMP COVER OR INJURY MAY OCCUR.**
2. If MSP250 Manual Pump is used with the handle pointing upward, lay case flat and run pump to completely clear fluid from lines or spatter may occur.
3. Keep inside of electronics enclosure and battery dry at all times.

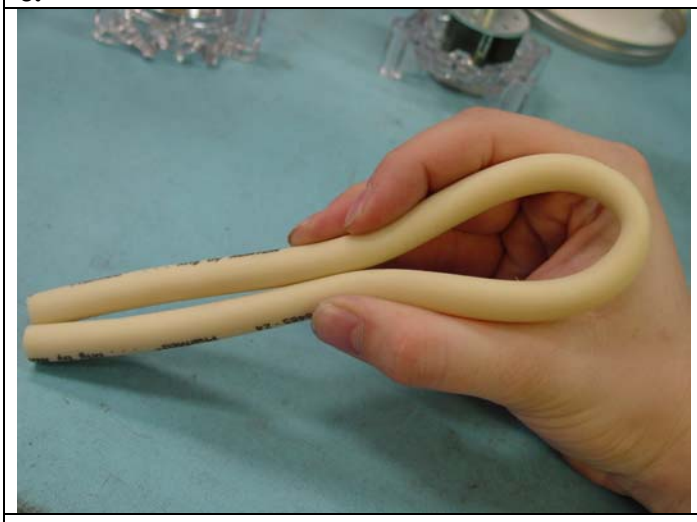
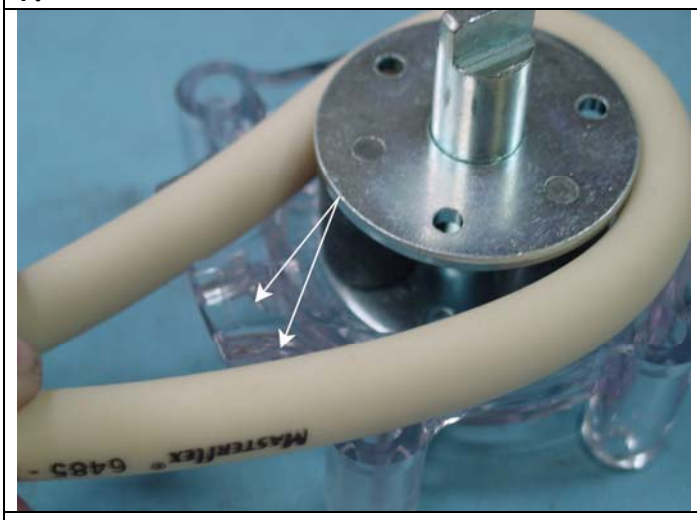
Replacing Pump Tubing

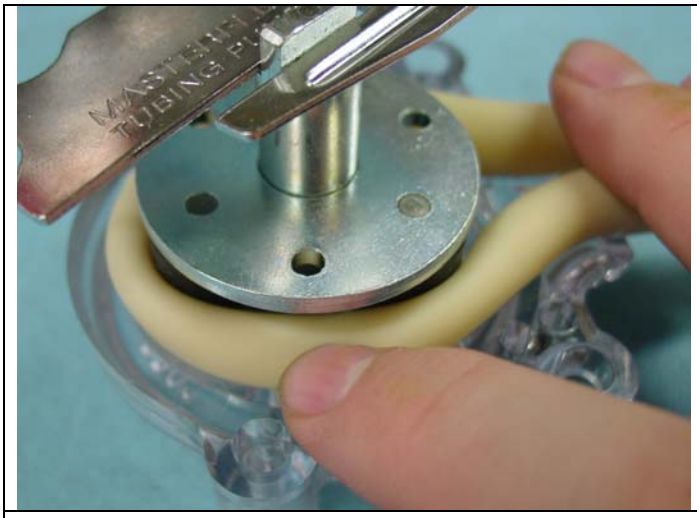
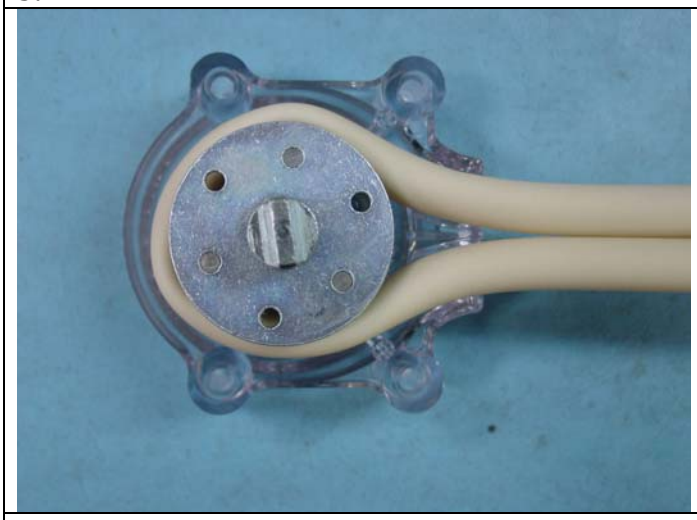
The pump tubing on the MSP250 Manual Sampling Pump does not need to be replaced frequently; however, it should be inspected periodically for wear or damage. Watch for cracking or creasing, which can indicate it is time to change the tubing. Manning recommends using PharMed tubing for the best performance.

To replace the pump tubing:

1. Loosen the four thumbscrews that hold the pump in place. There are five sealing washers attached to the pump body with adhesive. Make sure these stay in place.
2. Remove the four long screws.
3. Separate the two halves of the clamshell pump and remove the old tubing.

4. Orient the pump housing as shown below. (Note: The “bottom,” or the side that fits against the case, is pointing upward.)

5.	
	Orient rollers in ½ of pump housing as in picture. **Note roller position.**
6.	
	Fold pump hose in half, aligning ends and forming loop at other end.
7.	
	Place hose around pump rollers, making sure to place hose into grooves.
8.	

	Using the pump tool* included in the pump kit, rotate rollers clockwise while pressing hose in gap between rollers. ***Note: Pump tool is stored in a slot at the top left of the foam insert in case.**
9.	
	Continue until hose is in place.
10.	
	Once hose is in place, put on other half of pump housing.

11.	
	Hold two halves together and rotate rollers clockwise using the pump tool. Set aside.

12. To re-attach pump housing, line up the arbor shaft with the pump motor shaft, and place clamshell onto motor.

13. Rotate the clamshell to align the four screw holes.

14. Replace the long thumbscrews and finger tighten.

Intake Hose

The sampler is supplied with an extra male and female quick disconnect fitting to attach intake hose to the pump tubing. The MSP250 uses ¼" internal diameter intake hose, which is available from Manning as an accessory. Intake hose should always be ¼" internal diameter. If a larger internal diameter hose is used, there will be a loss of performance.

If there are solids or debris in the water being sampled, Manning recommends using a strainer on the intake hose to prevent clogging. Strainers are available from Manning in PVC or stainless steel.

If you have any questions, please call Manning Technical Support at (800) 863-9337 extension 205 or email service@manning-enviro.com.

Specifications

Size .....Controller, including Pump Housing: W 12.5 in. (31.75 cm) × H 7.00 in. (17.78 cm) × D 10 in. (25.4 cm)
Weight (dry) .....10 lbs (4.54 kg). Weight includes battery.
Environmental Protection.....NEMA 4X/NEMA 6 structural resin housing around electromechanical components
Sampler Pump .....¼-inch peristaltic 12 VDC pump with impact and corrosion-resistant plastic pump body, and dual-roller mechanism
Maximum Lift.....28 ft (8.5 m)
Transport Velocity .....927 ml per minute @ 10 ft. head height
Power Requirement .....7-Amp hour battery
Warranty: .....One year from date of shipment.

Accessories

MSP250 Manual Sampling Pump Spare Parts/Accessories

- **Replacement Pump Tubing**
  ¼-inch Pharmed (pre-cut 18-inch length) P/N 889924
  ¼-inch Pharmed (bulk by the foot) P/N 566927
- **Replacement Battery**
  Standard 8-Amp hour battery P/N 690539
- **Battery Charger**
  Standard-output Rapid/Float 2-stage Charger (12 VDC @ 750 mA; for 110 VAC operation) P/N 885505*
  High-output Rapid/Float Two-stage Charger for 110/220 VAC operation (12 VDC @ 1.25 A) P/N 889825**
- **Quick Disconnect Fittings**
  Female P/N 552104
  Male P/N 552105
- **Intake Hose**
  ¼-inch bulk clear intake hose P/N 566917*
  **Please specify required length in feet.*
- **Sample Containers**
  One 2.5-gallon polyethylene bottle w/cap P/N 687547
  One 4-gallon polyethylene bottle w/cap P/N 687551
  One 5-gallon polyethylene bottle w/cap P/N 687535
  One 2.5-gallon glass bottle w/Teflon lid liner P/N 889715
  5-gallon Bucket Mann™ with splashguard & transport lid P/N 889721
- **Strainers**
  ¼-inch PVC P/N 889146
  ¼-inch stainless steel (316 grade) P/N 579595

* Basic sampler includes one (1) 8-amp hour battery, one (1) standard-output battery charger, one (1) 18" pre-cut length of pump tubing with a set of male and female quick disconnect fittings attached, and one (1) additional set of quick disconnect fittings (male & female). Bottle, intake hose, and strainer are additional.
* 220V version includes one (1) 8-amp hour battery, one (1) high-output rapid/float two-stage charger, one (1) 18" pre-cut length of pump tubing with a set of male and female quick disconnect fittings attached, and one (1) additional set of quick disconnect fittings (male & female). Bottle, intake hose, and strainer are additional.

Engineering Specification

1. The controller enclosure is made of structural resin with NEMA 4X/NEMA 6 ratings.
2. All wetted parts have a minimum internal diameter of ¼-inch, and are stainless steel or PVC (optional strainer), PVC (sampling hose), and Pharmed (pump tubing).
3. The sampler incorporates a 3-roller ¼-inch ID peristaltic pump
4. The sample liquid must be under forced flow at all times and shall not pass through a metering chamber, distribution plate, or valves. .
5. The sampler is capable of a transport velocity of 927 ml per minute @ 10 ft. head height.
6. The sampler has an optional weighted strainer of PVC or stainless steel.
7. This sampler is a Manning ¼-inch MSP250 Manual Sampling Pump.

MSP250 Manual Sampler 08/18/07

For parts and service, please contact: Manning Environmental Tech Support (800) 863-9337 x 205
or email service@manning-enviro.com

Headquarters and Sales:

Manning Environmental, Inc.
1968 South Austin Avenue
Suite 101
Georgetown, Texas 78626

Phone: (800) 863-9337
Fax: (512) 863-4472
Email: sales@manning-enviro.com
Web: http://www.manning-enviro.com

Manning Environmental Limited Factory Warranty

Manning Environmental, Inc., warrants this product to the original purchaser against any defects that are due to faulty workmanship or material for a period of one year (365 days) from the date of shipment.

During the warranty period Manning Environmental, Inc. will repair or replace, at its sole discretion, any defective equipment or parts. Manning's liability is strictly limited to repair and/or replacement. Any product repaired or replaced under this warranty will be warranted only for the remainder of the original product warranty period.

This warranty does not apply to consumable products or consumable components of products such as, but not limited to tubing, intake hose, differential pressure switches and bottles.

Items may not be returned without authorization from Manning Environmental, Inc.

This warranty applies only to products sold under the Manning trademark and is the sole express warranty made by Manning Environmental, Inc. All implied warranties, including without limitation, the warranties of merchantability or fitness for a particular purpose, are disclaimed.∗

Limitations:

This warranty does not cover the following:

1. Damage caused by acts of God, natural disaster, labor unrest, acts of war (declared or undeclared), terrorism, civil strife or acts of any governmental jurisdiction
2. Damage caused by normal wear, neglect, misuse, accident, corrosion or improper application or installation
3. Damage caused by any repair, attempted repair or modifications not authorized by Manning Environmental, Inc.
4. Any product not used in accordance with the instructions furnished by Manning Environmental, Inc.
5. Freight charges to return merchandise to Manning Environmental, Inc.
6. Freight charges on expedited or express shipment of warranted parts or products.
7. Travel and lodging fees associated with on-site warranty repair
8. Manning 6.1 cubic foot refrigerators, which are covered under the refrigerator manufacturer's warranty
9. Labor performed at the factory to clean the equipment so that it can be safely and properly repaired

This warranty constitutes the final, complete, and exclusive statement of warranty terms. Manning Environmental, Inc. does not authorize any other person to make any other warranties or representations on its behalf.

In no event shall Manning Environmental, Inc. be liable for any incidental or consequential damages of any kind for breach of warranty or negligence. The remedies of repair or replacement as stated above are the exclusive remedies for the breach of this warranty.

A Return Material Authorization (RMA) must be obtained prior to sending any equipment to Manning for warranty service. Contact the Manning Service Department at:

Manning Environmental, Inc.
1968 South Austin Avenue
Georgetown, Texas 78626
Phone: 512-863-9337, Fax: 512-863-4472

∗Some states within the United States do not allow the disclaimer of implied warranties and if this is true in your state the above limitation may not apply to you. This warranty gives you specific rights- you may also have other rights that vary from state to state.