



# LiterMeter Basic Auto Top Off System

WITH SENSOR TUBE ASSEMBLY

(LM-APM-G7)



## OPERATION MANUAL

**SpectraPure® Inc.** assumes no responsibility for water damage due to leaks. It is the user's responsibility to determine that the system is leak-free by monitoring installation for 72 hrs..

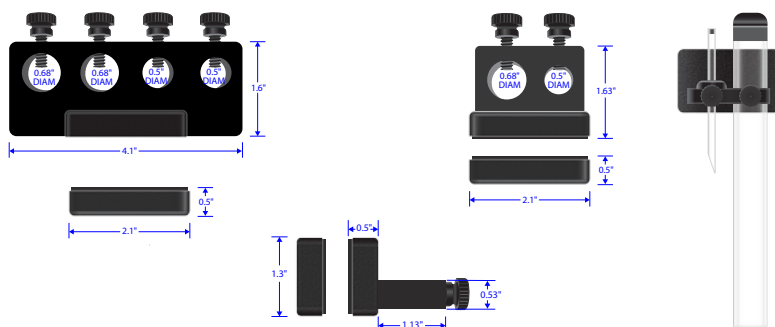
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## SpectraPure's New 2 and 4 Position Magnetic Probe/Sensor Holders



# SpectraPure®

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## OVERVIEW:

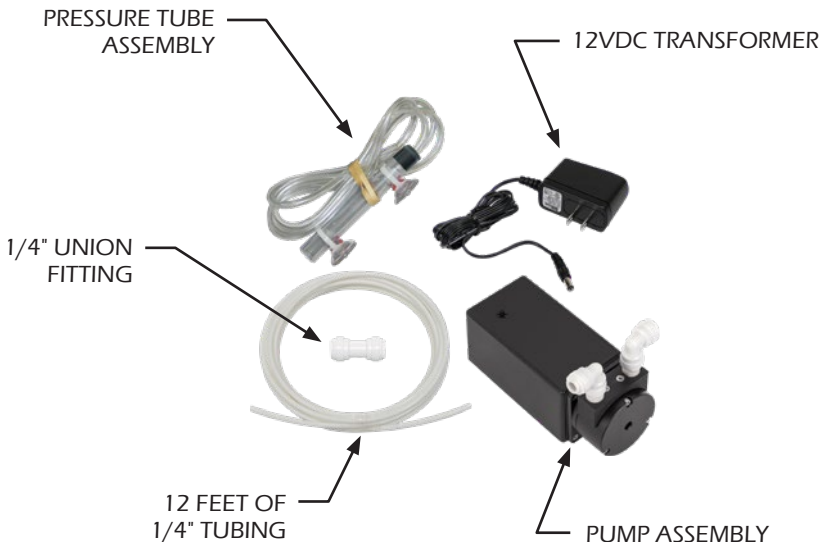
The SpectraPure LM-APM-G7 uses our latest 7th generation LiterMeter® peristaltic pump with improved noise dampening. The pump is able to draw liquids from over 25 feet below and to deliver it over 60 feet horizontally. Liquids never come in contact with any part of the pump and there is no chance of damage to the pump if it is run dry.

The LM-APM-G7 is a basic Auto Top Off system which uses a pressure tube assembly to turn the pump on and off. This represents a vast improvement over a float-activated pump which is constantly turning on and off with minor fluctuations in the water level, thereby exacerbating the effect of TDS creep.

## FEATURES:

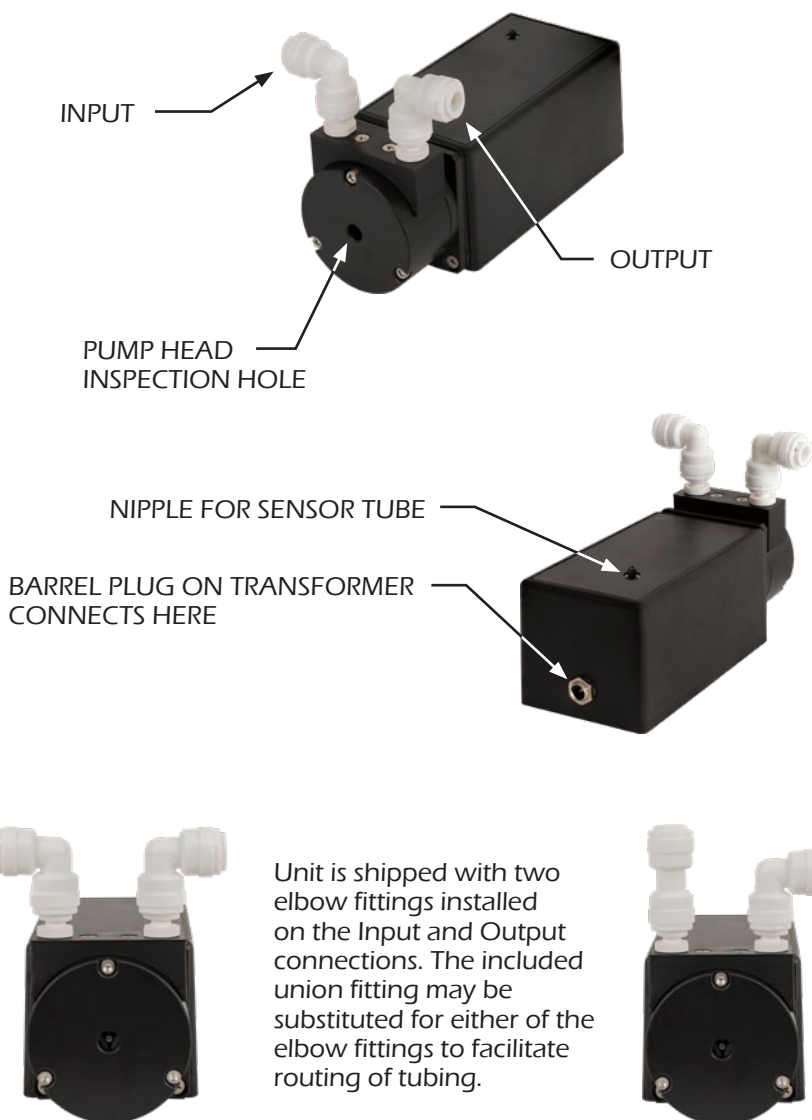
- Improved sound dampening material for the quietest operation available
- The most powerful pump on the market - offering over 25 feet of vertical draw, and over 60 feet of delivery
- Tested for over 25,000 hours (3 years) of continuous operation
- No damage when run dry
- New Interchangeable Yoke for simple tubing replacement
- 2-Year Limited Warranty

## SYSTEM COMPONENTS



## PUMP CONNECTIONS

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## PUMP INSTALLATION

(See Pump Connections on Page 4.)

1. Before installing your ATO, turn the unit on and run it dry for 20 minutes in order to break the pump in.
2. Use 1/4" tubing to connect the elbow fitting on the INPUT side of the pump to the Storage Reservoir. Firmly push the tubing into the quick connect fitting until it hits the bottom of the fitting.

NOTE: Be sure the tubing cannot escape from the Storage Reservoir.

3. Use 1/4" tubing to connect the elbow fitting on the OUTPUT side of the pump to the sump. Firmly push the tubing into the quick connect fitting until it hits the bottom of the fitting.

NOTE: Be sure the tubing cannot escape from the sump.

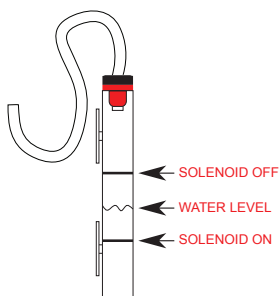
4. Locate the sensor tube with clear air line tubing attached to it and connect the loose end of the tubing to the 1/8" nipple on the top of the pump.

**WARNING:** Airline tubing MUST be connected to the 1/8" nipple on the top of the LLC Box BEFORE immersing the sensor tube in water.

5. Submerge Sensor Tube into water until you hear a "click" in the LLC Box. This is the turnoff point. Mark that spot with a permanent marker. Slowly pull the tube out of the water until it clicks again. This is the turn on point. Mark it, too. (See Figure below.)

6. Mount the sensor tube with the suction cups provided or by whatever means you prefer. Water will cover approximately half of the sensor tube when shutoff occurs.

**NOTE:** A small dab of aquarium silicone sealant on each suction cup will prevent them from detaching.



For the most secure method of securing the sensor tube to the tank wall, see SpectraPure's 2 or 4 position Magnetic Probe/Sensor Holders. (See Page 2)

The distance between the marks will be approximately 1"

## ***SERVICING THE PUMP MODULE:***

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These instructions apply to ALL SpectraPure Pump Products. It is recommended that the pump head be inspected and cleaned, or the tubing replaced per the following procedure.

1. Disconnect the tubing from the pump.

NOTE: Make sure to keep track of which tube goes to which elbow. Getting these reversed will reverse the flow of the water.

2. Use the provided 3/32" Allen Hex Key to remove the three bolts in the pump head and lift the pump head away from the motor shaft. (Fig. 1)
3. Remove the three white rollers from the pump head. (Fig. 2)
4. If they are dirty, clean the three white rollers, tubing, head and base plate with a cloth soaked in De-Solv-it® (available in most grocery stores), acetone, or petroleum spirits. Common "lighter fluid" also works well. Make sure you remove all gummy deposits, then rinse parts with water and dry. Next, wipe the motor shaft clean. Be careful not to spill solvents on the plastic case or it will damage the finish. Keep cleaning fluids away from the bearing at the base of the motor shaft.
5. If you are replacing the tubing assembly, unscrew the two phillips head screws on top of the yoke assembly. (Fig. 3) Pull the yoke and tubing away from the pump until the tubing is free of the slots that hold it in place. Slide the new yoke/tubing assembly (Fig. 4) into place and screw in the two phillips head screws which hold the yoke in place.
6. Place two of the three rollers into the pump body, pushing them down against the tubing. (Fig. 5) Hold them in position with your left thumb and then push the third roller into place. (Fig. 2)
7. Press the pump head firmly against the pump plate and check for proper alignment. Use the 3/32" Allen Hex Key to reinstall the three pump head bolts.
8. Reinsert the tubing into the push fittings on the two elbows.

NOTE: Make sure that you install the tubing into the same elbow that you disconnected them from so that the direction of flow remains the same.

(continued on next page)

## SERVICING THE PUMP MODULE: (continued)

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Fig. 1

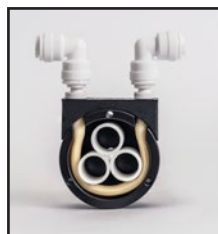


Fig. 2



Fig. 3



Fig. 4

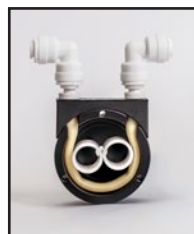


Fig. 5

## TROUBLESHOOTING:

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### Excessive Noise

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1. Make sure that the Pump Module is not attached to or sitting atop a box or enclosure that will act as a "speaker" and amplify the vibration of the pump.
2. Secure the attached tubing so that it does not vibrate against nearby walls, cabinets, or other objects.

### Power is on but rollers are not turning

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1. Look through the observation hole at the end of the pump head and see if the shaft is turning. If not, call SpectraPure Technical Support.
2. If the shaft is turning, follow the instructions on pages 6-7 for servicing the pump head.

### Pump is running and rollers are turning but no fluid is being pumped.

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1. Check the ends of the tubing for obstructions.
2. Check for a loose connection on the suction side which will cause the pump to lose its prime.

## **TWO-YEAR LIMITED WARRANTY:**

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SpectraPure, Inc.® warrants the product to the original owner only to be free of defects in material and workmanship for a period of two years from the date of receipt. SpectraPure's liability under this warranty shall be limited to repairing or replacing at SpectraPure's option, without charge, F.O.B. SpectraPure's factory, any product of SpectraPure's manufacture. SpectraPure will not be liable for any cost of removal, installation, transportation or any other charges which may arise in connection with a warranty claim. Products which are sold but not manufactured by SpectraPure are subject to the warranty provided by the manufacturer of said products and not by SpectraPure's warranty. SpectraPure will not be liable for damage or wear to products caused by abnormal operating conditions, accident, abuse, misuse, unauthorized alteration or repair or, if the product was not installed in accordance with SpectraPure's or other manufacturer's printed installation and operating conditions, or damage caused by hot water, freezing, flood, fire or acts of God.

SpectraPure will not be responsible for any consequential damages arising from installation or use of the product, including any water or mold damage due to flooding which may occur due to malfunction or faulty installation, including, but not limited to failure by installer to over- or under-tighten fittings, housings, and/or push-style fittings, or improper installation of push-style fittings. Consumable items such as prefilters and membranes are not covered under the two-year warranty.

To obtain service under this warranty, the defective system or components must be returned to SpectraPure with proof of purchase, installation date, failure date and supporting installation data. Any defective product to be returned to the factory must be sent freight prepaid. Documentation supporting the warranty claim and a Return Merchandise Authorization (RMA) number must be included. SpectraPure will not be liable for shipping damages due to the improper packaging of the returned equipment and all returned goods must also have adequate insurance coverage and a tracking number.

SpectraPure will not pay for loss or damage caused directly or indirectly by the presence, growth, proliferation, spread or any activity of "fungus", wet or dry rot or bacteria. Such loss or damage is excluded regardless of any other cause or event that contributes concurrently or in any sequence to the loss. We will not pay for loss or damage caused by or resulting from continuous or repeated seepage or leakage of water, or the presence or condensation of humidity, moisture or vapor, that occurs over a period of 14 days or more. "Fungus" and "fungi" mean any type or form of fungus or Mycota or any byproduct or type of infestation produced by such fungus or Mycota, including but not limited to, mold, mildew, mycotoxins, spores, scents or any biogenic aerosols.

SpectraPure will not be liable for any incidental or consequential damages, losses or expenses arising from installation, use, or any other causes. There are no expressed or implied warranties, including merchantability or fitness for a particular purpose, which extend beyond those warranties described or referred to above.

**\* The two-year limited warranty does not apply to consumable items, including but not limited to, filters, cartridges, rollers, and tubing, unless specifically stated above.**

## **TERMS AND CONDITIONS:**

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1. Shipping charges on units or parts submitted to our facility for repair or replacement must be borne by the registered purchaser. After repair or replacement, the factory will return the unit or part freight prepaid to the customer.
2. We assume no warranty liability in connection with our equipment other than as herein specified.
3. This warranty is in lieu of all other warranties expressed or implied, including warranties of fitness for a particular purpose.
4. We do not authorize any person or representative to assume for us any other obligation on the sale of our equipment. This is the exclusive remedy and liability for consequential damages under any and all warranties which are excluded to the extent exclusion is permitted by law.
5. Proof of original purchase date must accompany all warranty claims.
6. SpectraPure, Inc. Reserves the right to change prices without notice when necessary. All prices in the catalog are quoted in US dollars.
7. Claims for error in quantity or condition must be made within 10 days of receipt of material. SpectraPure, Inc. will not be responsible for any claimed shortages not reported within 10 days. Returns other than warranty claims may be subject to 20% restocking fee.
8. SpectraPure, Inc. cannot be held liable for damage or loss to a shipment by a freight carrier. Check shipment for damage before acceptance or note on freight bill subject to inspection for concealed damage. Consignee must file claim. SpectraPure, Inc. will offer as much assistance as possible.
9. A complete credit check is required prior to shipping on a Net 30 basis. In the interim period during which credit references are being evaluated, all orders must be prepaid until approved.
10. All returned checks [due to insufficient funds or closed accounts] will be subjected to a **\$35 penalty charge**.
11. Invoices on Net 30 accounts not paid within 30 days of shipment will be considered delinquent and will accrue Finance charges at the rate of 1.5% per month (18% per annum).