#### **RETURN OF GOODS**

Hamilton Company's return and repair policy is written to protect its employees from potentially hazardous materials (e.g., serum, radioactive materials, carcinogenic chemicals, etc.) or any substance that may cause them partial or permanent disability during the inspection or repair process. In returning product, the customer acknowledges that the product is free from any hazardous materials. Furthermore, the customer assumes responsibility should the returned product be determined to be hazardous.



# PUSH-BUTTON HAND PROBE FOR LARGE-VOLUME SAMPLE DILUTIONS

Congratulations! You have purchased the finest quality precision fluid measuring device available today. We at Hamilton Company combine top quality materials with skilled workmanship, ensuring the highest possible performance level of every precision fluid device we manufacture. With proper care and handling, the push-button hand probe for large-volume samples will provide unsurpassed performance in precision liquid handling year after year.

The Hamilton push-button hand probe for large-volume sample dilutions is one of the most versatile probes available on the market today. Advantages include large-volume sample dilutions (1-5 mL), disposable tips, and the ability to clear the probe tip with air.

Operate the push-button probe easily with one hand to aspirate and dispense samples. Teamed with Hamilton's diluter/dispenser, the probe creates a liquid handling system capable of maintaining a high degree of accuracy and precision.

The probe is designed to work with samples ranging in viscosity from that of water to that of oil. Clear the disposable probe tip with air displacement to ensure precise dilutions of highly viscous samples.

#### WARRANTY STATEMENT

Hamilton Company unconditionally guarantees its products to be free of defects in materials and workmanship. Any product that fails due to such defects will be repaired or replaced at our discretion without cost, provided the device is returned with an explanation. It is the responsibility of the purchaser to determine the suitability of application and material compatibility of the products based on the published specifications of the products.

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# HAMILTON THE MEASURE OF EXCELLENCE 5M

http://www.hamiltoncompany.com

a THE MEASURE OF EXCELLENCE on Hamilton Company manufactures products for precision fluid measuring: syringes, valves diluter/dispensers, and robotic sample processors, as well as polymeric HPLC columns and resins. For additional information any of these product lines, please contact Hamilton Company or your local Hamilton representitive.

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#### **OPERATING INTRUCTIONS**

(Numbers in parentheses refer to part numbers in Figure 1.)

**Attaching probe to unit**: Attach the probe cable and PTFE tube to your Hamilton diluter/dispenser as directed in the user's manual for the instrument.

**Attaching the probe tip**: Push the disposable probe tip (11) onto the dispensing body (12) until firmly in place.

**Activating the hand probe**: Press the switch cap (6) to activate the Hamilton diluter/dispenser either to aspirate or dispense, depending on the program status.

**Displacing excess fluid**: Press the upper air pump button (2) to pump air into the disposable probe tip (11). This will force any residual fluid from the disposable probe tip. It may be necessary to press the button several times to displace the fluid in the disposable probe tip.

**Removing the disposable probe tip**: Dislodge the disposable probe tip (11) from the dispensing body by firmly grasping the probe tip and rotating it while pulling down.

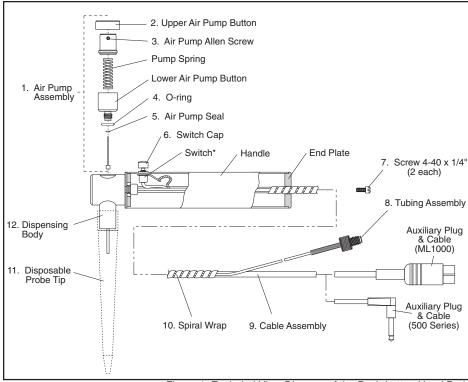


Figure 1 Exploded View Diagram of the Push-button Hand Probe

#### MAINTENANCE AND REPAIR

NOTE: Hamilton Company services the push-button hand probe and also provides parts for on-site replacement. The following instructions provide you with assembly/disassembly information.

## **Air Pump Repairs**

- 1. Remove the air pump assembly by turning it counterclockwise.
- 2. Replace the O-ring in the dispensing body. Rethread the new air pump assembly, and hand-tighten.
- 3. Replace the air pump seal, using an Allen wrench to loosen the Allen screw.
- 4. Remove the upper air pump button from the lower air pump button. Remove the seal rod, seal, and spring.
- 5. Replace the seal on the seal rod, and reassemble the air pump.

## **Probe Handle Repairs**

- 1. Remove the two screws from the end of the probe handle. Remove the end plate, or thread it down the cable about 5-6 inches.
- 2. Pull off the switch cap, and remove the nut holding the switch. Then pull the blue anodized handle away from the dispensing body.
- 3. Unscrew the CTFE tube connector and tube assembly from the dispensing body. Pull the switch into the handle, and remove the cable/switch and tubing assemblies from the blue anodized handle.
- 4. Replace all non-functional parts, and reassemble the unit in reverse order of disassembly.

#### REPLACEMENT PARTS

(Numbers in parentheses refer to part numbers in	Figure 1.)
Push-button Hand Probe	77065
(1) Air Pump Assembly	30183
(3) Air Pump Allen Screw	16685
(4) Air Pump Assembly O-ring	16101
(5) Air Pump Seal	
(6) Switch Cap	60305
(7) Handle End Plate Screw 4-40 x 1/4"	
(8) Tube Assembly with Connectors	30181
(9) Cable Assembly with Push-button Sv	vitch30180
(10) Spiral Wrap (specify inches)	27106
(11) Disposable Probe Tips (5 mL), 250/p	
Allen Wrench	16476