

# PIPETTE CONTROLLER

Congratulations! You have purchased the finest quality precision fluid measuring device available today. We combine top quality materials with skilled workmanship, ensuring the highest possible performance level of every precision fluid handling device we manufacture. With proper care and handling, the Pipette Controller (p/n 84001) will provide unsurpassed performance in precision liquid handling year after year.

**Syringes and needles manufactured by Hamilton Company are intended for scientific research and laboratory use only and are not intended for human *in vivo* use.**

Hamilton's Pipette Controller replaces bulb-type pipette fillers when using 1.0 mL, 2.5 mL, 5.0 mL or smaller volume pipettes. Use the pipette controller with any graduated or volumetric pipette to accurately transfer fluids.

The pipette controller syringe is a Hamilton Gastight® Luer Tip syringe modified with a special free-sliding, thumb-wheel plunger. The syringe is supplied with 41 mm (1-5/8") of clear vinyl tubing, 3 mm ID (0.125") x 6 mm OD (0.250"), to attach a pipette to the syringe's luer tip. The syringe draws liquids into the pipette (liquids do not enter the syringe barrel).

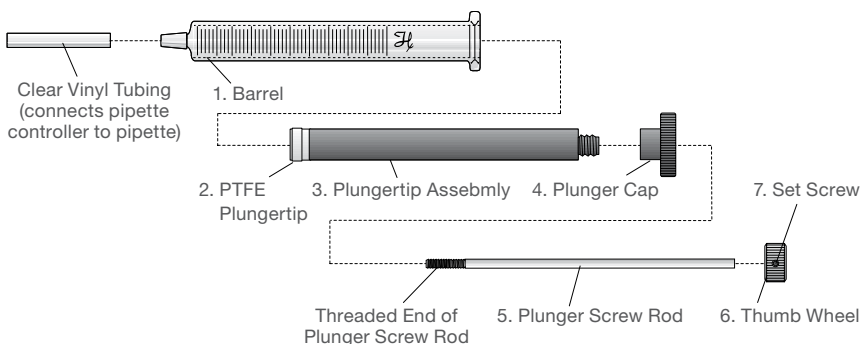
**Note: Since liquid does not enter the pipette controller syringe, the PTFE® plunger tip may be lubricated lightly with Dow Corning® #4 compound or a comparable lubricant to maintain the suction effect of the syringe.**

## Operating the Pipette Controller

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

1. Using the clear vinyl tubing, connect the luer tip of the pipette controller syringe barrel (1) and the pipette.
2. Fill the pipette by pulling the pipette controller plunger.
3. Stop filling when the liquid level is almost to the desired calibration line of the pipette. Complete the filling process by turning the plunger thumb-wheel (6) counterclockwise (to raise the liquid level) or clockwise (to lower the liquid level).
4. Push the plunger forward to expel the contents of the pipette.

**Figure 1: Pipette Controller Diagram**



## Disassembling the Plunger-Screw Rod Assembly

1. Remove the thumb-wheel (6) by loosening the set screw (7) with the Allen wrench provided.
2. Turn the plunger screw rod (5) clockwise until the threads of the plunger screw rod are showing through the PTFE plunger tip (2). Then, holding the threaded tip of the plunger screw rod, turn counterclockwise until you can remove the plunger screw rod through the plunger tip.

## Reassembling the Plunger-Screw Rod Assembly

1. Lubricate the threads of the plunger screw rod sparingly with Dow Corning #4 or similar lubricant.
2. Reinstall the plunger screw rod (5) by inserting the smooth end through the PTFE plunger tip, until the threads on the other end are engaged into the plunger tip. Turn the plunger screw rod clockwise.
3. Continue threading the plunger screw rod assembly until it extends 1/4" or more beyond the plunger cap (4).
4. Attach the thumb wheel (6) to the plunger screw rod, using the Allen wrench to tighten the set screw (7).
5. Retract the plunger screw rod until it no longer extends beyond the end of the PTFE plunger tip. Continue to retract the plunger screw rod about 1/4".

**Note: The threaded end of the plunger screw rod should not extend beyond the end of the plunger assembly since it may damage the glass syringe barrel during injection.**

6. Wet the PTFE plunger tip with water and insert it into the barrel (1).

## Maintaining the Pipette Controller

The pipette controller requires minimal maintenance, limited to lubrication of the plunger screw rod, and replacement of the plunger assembly and glass barrel. Lubricate the threads of the plunger screw rod with Dow Corning #4 compound or a comparable lubricant any time you disassemble the plunger assembly for replacement, repair or cleaning.

## WARRANTY STATEMENT

Hamilton Company unconditionally guarantees its products to be free of defects in materials and workmanship. Any product which fails due to such a defect will be repaired or replaced at our discretion without cost, provided the device is returned on a Return Materials Authorization (RMA). 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.

## 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 a 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.

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