

# Operation Manual for the Drummond Portable Pipet-Aid<sup>®</sup>

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Catalog Number 4-000-100  
4-000-200  
4-000-200-E



**Quality  
and Reliability  
Guaranteed**

Made in USA  
by



**DRUMMOND**  
SCIENTIFIC COMPANY

CE

**Drummond Scientific Co.**  
500 Parkway  
Broomall, PA 19008  
800/523-7480 • 610/353-0200  
[www.pipet-aid.com](http://www.pipet-aid.com)

# Operating Instructions for the Drummond

## Statement of Purpose

All Pipet-Aid models are designed to transfer liquids with the use of serological, volumetric and/or blow-out pipets in either glass, plastic or something similar.

## Rules for Safe Operation

- For indoor use only.
- Do not attempt to use the charger with any other product.  
**DO NOT ATTEMPT TO CHARGE THIS UNIT WITH ANY OTHER CHARGERS.**
- This product includes rechargeable Ni-MH batteries. Do not incinerate batteries as they may explode at high temperatures.
- Never operate unit in an explosive atmosphere.
- Expelling liquid from a pipet generates aerosols. The faster the liquid is expelled, the more aerosols are generated. Understand the nature of the liquid being pipetted and take appropriate precautions.
- Do not operate unit with a damaged cord.
- Use charger only in a standard electrical outlet.
- Do not handle charger with wet hands.
- Do not put unit or charger in water or other liquid.
- Pipetting acids or strong alkalis will damage unit.
- When servicing, use only identical Drummond replacement parts.
- Save these instructions.

**If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired. Always use the charger or power supply that is supplied with the unit.**

## Connections to Charger:

Check the power supply to see that the line voltage corresponds to the voltage indicated on the mains adapter.



If the mains adapter supply and the line voltage are not compatible, the electrical components of the Pipet-Aid® may be damaged or destroyed.



Before each use, confirm that the mains adapter cable is not damaged, worn or severely buckled and there are no breaks in the insulating surface. If any damage is noted, do not use the Pipet-Aid® until the damaged mains is replaced.

## Specifications for Usage

**This equipment is for indoor use only.**

Temperature Range 10°C–35°C, Maximum Humidity 60%

**For use with pipets from 1 mL to 100 mL**

**FAILURE TO USE THE EQUIPMENT IN ACCORDANCE WITH INSTRUCTIONS OR MODIFYING THE EQUIPMENT WILL VOID WARRANTIES.**

**CAUTION:** CAREFULLY READ THROUGH THIS ENTIRE MANUAL BEFORE USING YOUR NEW PORTABLE PIPET-AID®. PAY CLOSE ATTENTION TO THE RULES FOR SAFE OPERATION WARNINGS AND CAUTIONS.

# Portable Pipet-Aid®

## Operating Instructions

All Drummond Pipe-Aids are essentially the same in operation

The pipet, 1 mL or larger, is inserted into the nosepiece with a slight twisting motion. Pushing the top button will fill the pipet; the bottom button will empty. In either case, the further the button is pressed the more positive the action. Releasing either button will hold the liquid level stationary.

The portable unit should be initially charged for 1 or 2 hours before use. Subsequent overnight recharging will assure an adequate voltage for the next day.

Under normal circumstances, the Ni-MH battery in the Portable Pipet-Aid should last approximately 2 years. It is user replaceable.

All Pipet-Aid® nosepieces can be autoclaved in the event of over-pipetting. The portable handle cannot be autoclaved; however, the TC Nosepiece on each unit, when used with the Drummond filter specified, should eliminate possible contamination. The TC filter, when challenged with 0.035 micro particles, showed no penetration. The filter must be replaced following contact with an aqueous liquid.

All filters lose efficiency as they accumulate particulate matter. Routine replacement is advised.

## Handle

**Note: Before opening the Portable handle, we strongly suggest you contact Drummond for assistance, 800-523-7480**

To open Portable handle, remove the entire nosepiece, cut serial number label at seam, remove 5 screws, placing the screw holes down (**screw holes should face the table**). Lift off the top half of the handle. Internal components will remain in place. New Twist-Off TC Nosepiece simply unscrews from handle.

Buttons and valve assembly must not be broken or evidence any cracks; in either case, they must be replaced.

Micro-Switch, Portable Pipet-Aid; (at end of metal lever) should be firmly in place against back shell of handle. Press with finger to check.

To remove battery in Portable unit, pry away from back with screwdriver. Enough tape usually stays in place to secure new battery.

Replacement Battery supplied by Drummond is matched to our charging unit. Other batteries may require different charging rates. To get expected 2 years of use, use Drummond Battery only.

## Nosepiece

We do not use any “cotton” filters. Remove cotton found in any nosepiece.

The Drummond Filter used in the TC Nosepiece (all portable, some regular units) provides unique protection against over pipetting. As little as “one” drop of aqueous liquid will block this filter. It must be replaced. Other filters do not provide the protection! DO NOT USE SUBSTITUTES.

Rubber insert should be replaced when worn, or tears become visible.

## Power Supply

Portable unit will only run off “charger” if battery is good (and partially charged).

**If battery is dead, charger will not operate unit.**

Check apparent “dead” battery by trying another Drummond charger.

Routine overnight charging has no detrimental effect on battery.

## Instructions for Cleaning

Wiping the unit with a soft cloth or wipe with isopropyl alcohol is sufficient to clean the unit. Avoid the use of acetone and other organic solvents which will damage the handle.

All components inside the nosepiece may be autoclaved with the exception of the Drummond Self-locking Filter. Replace the filter when compromised.

**STOP** Always disconnect the charger from the unit when cleaning.

**Questions,  
Comments,  
Suggestions,  
or Service:**

**CALL OUR HOTLINE  
AT 1-800-523-7480**



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## **Ordering Information**

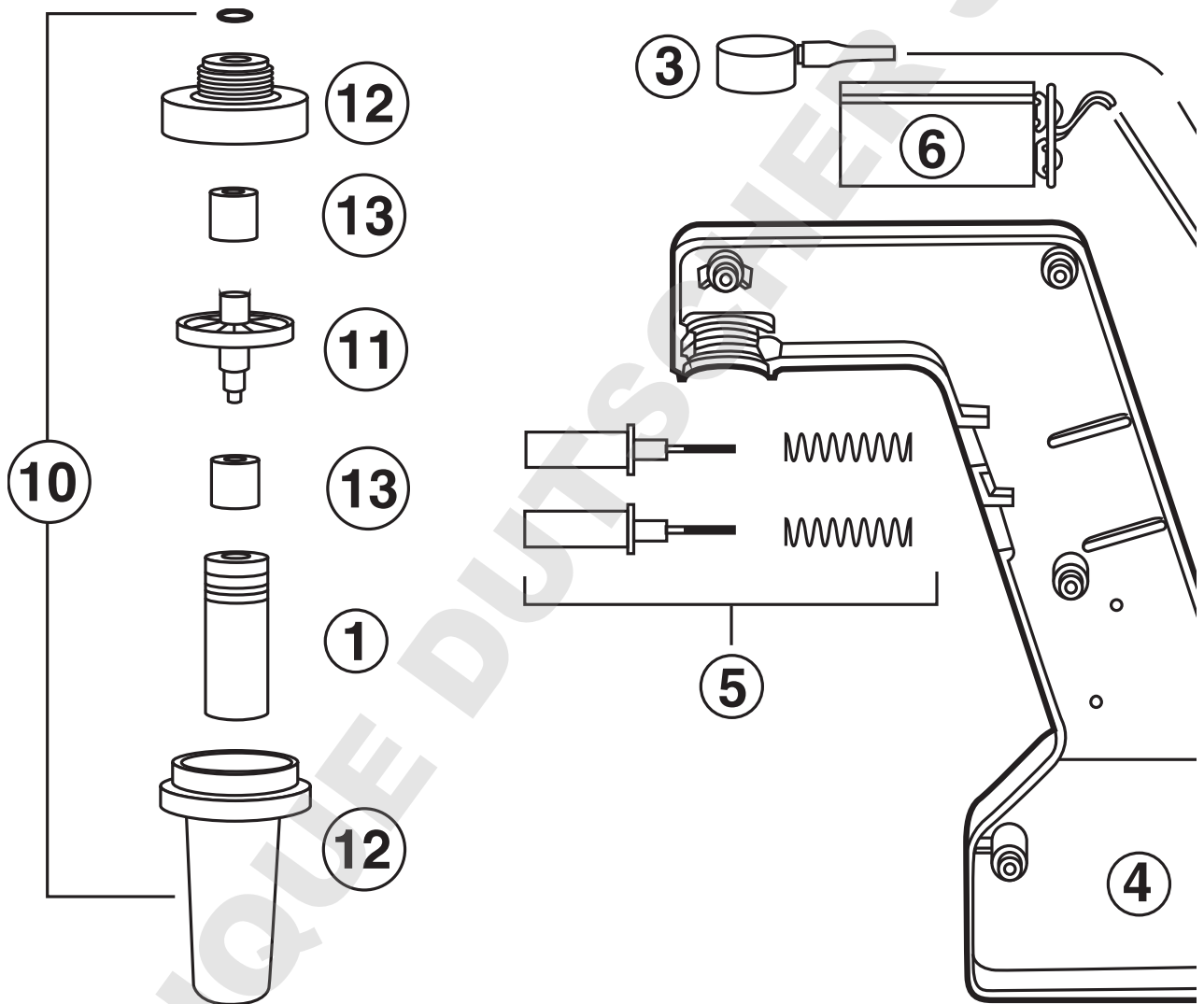
<b>Catalog No.</b>	<b>Description</b>
4-000-100	Supplied complete with 110V charger plus four replacement filters
4-000-200	Same as above but 230V, CE, Euro plug
4-000-200-E	Same as above but 240V, CE, UK plug

## **Specifications**

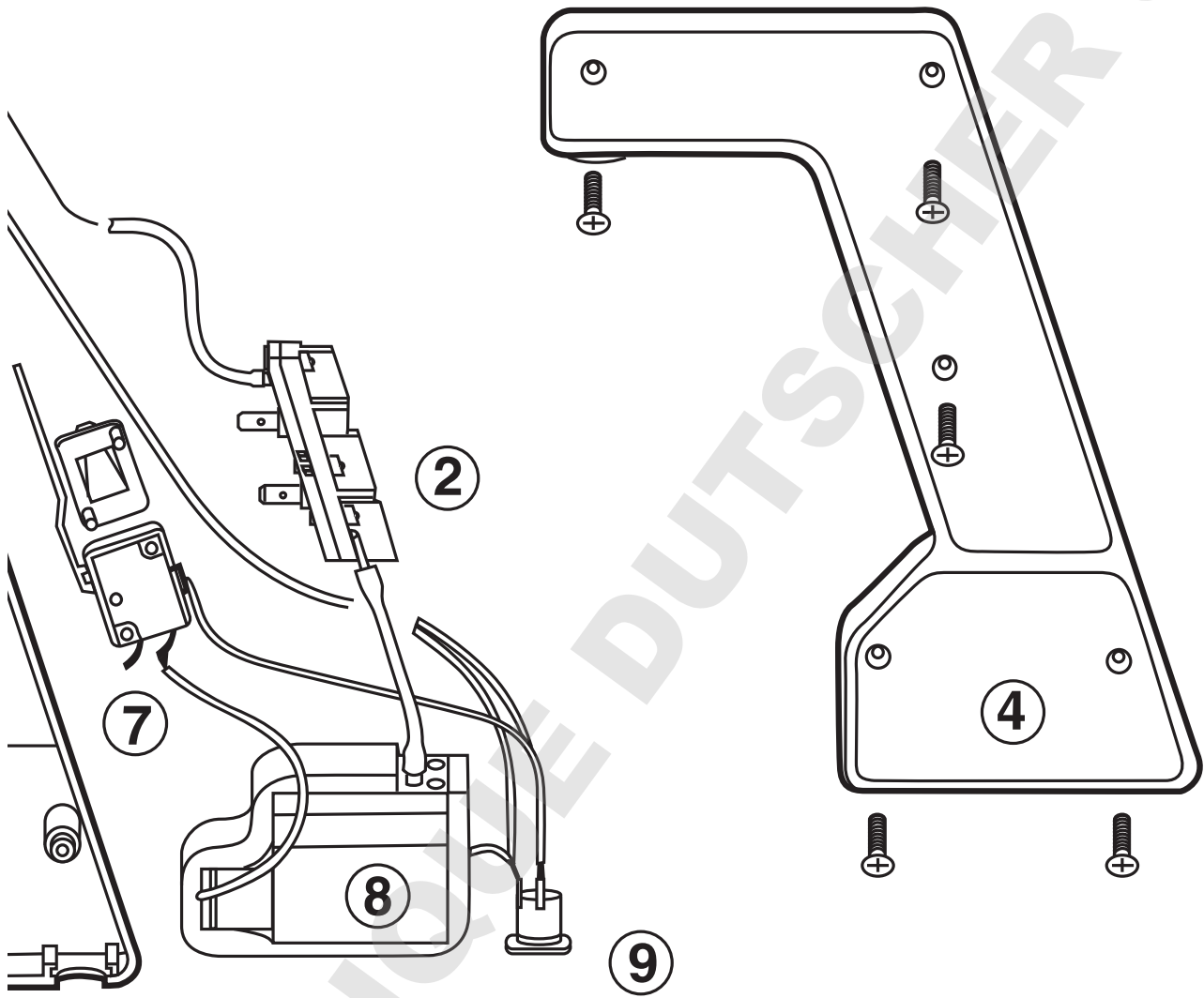
Size	10"
Weight	8 oz.
Capacity	Accepts 1 to 100 mL pipets
Battery	Ni-MH (8.4V/170 mAh)

## Parts

Commonly used parts (e.g. rubber inserts, batteries) are available from your dealer or Drummond Scientific Company. We welcome your comments, questions or suggestions.



	<b>Cat. No.</b>	<b>Description</b>
(1)	4-000-002	Rubber Insert (2/pk)
(2)	4-000-012-W	Valve Body Only
(3)	4-000-013	Handle Connector
(4)	4-000-017-P	Handle Shell, Portable
(5)	4-000-021	Button Assembly with Spring (pair)
	4-000-030	Pipet-Aid Charger 110V, (8.7 V/8 mA)
	4-000-031	Pipet-Aid Charger 230V, CE, Euro (8.7 V/8 mA)
	4-000-033	Pipet-Aid Charger 220V, CE, UK (8.7 V/8 mA)
(6)	4-000-035	Ni-MH Rechargeable Battery (8.4 V/170 mAh)



	<b>Cat. No.</b>	<b>Description</b>
(7)	4-000-037	Portable Micro-Switch
(8)	4-000-040	Portable Motor and Pump
(9)	4-000-046	Wire Harness Switch and Terminal Port
(10)	4-000-050	EZ Grip TC Nosepiece Complete Kit
(11)	4-000-051/051-S	Self-locking TC Filter 5/pk (051-S - Sterile)
	4-000-052/052-S	Self-locking TC Filter 50/pk (052-S - Sterile)
(12)	4-000-053-A	EZ Grip TC Nosepiece Outer Shell Only
(13)	4-000-057	TC Rubber Gaskets (pair)
	4-000-089	Pipet-Aid Holster-Type Wall Bracket (not shown)

## Maintenance and Servicing

Keep your Pipet-Aid® clean and charged at all times. When not in use, it is appropriate to keep the unit plugged into the charger. No damage will occur if you are using the charger supplied.

**Drummond Self-locking Filters are provided with all models that use filters. Replacement part numbers are:**

4-000-051	5 pk	4-000-051-S	5 pk, sterile
4-000-052	50 pk	4-000-052-S	50 pk, sterile

These filters must be replaced if over-pipetting occurs. They protect the handle components as well as minimize cross contamination of samples and contain two membrane layers.

All rechargeable batteries have a limited life span; generally each battery will last 1,000 cycles (charges) and then must be replaced. Battery replacement is a user function and will not require any special tools; a Phillips screwdriver is all you will need.

## Voltage Rating and Frequency: Chargers/Power Supplies

4-000-100			
4-000-030 (charger)	120V, 60Hz, 55mA		9VDC/10mA
4-000-200			
4-000-031 (charger)	230V, 50Hz, 55mA, CE, Euro		8.7V/8mA
4-000-200-E			
4-000-033 (charger)	240V, 50Hz, 55mA, CE, UK		8.7V/10mA

## Battery Specifications – Portable Pipet-Aid®

Cat. No.	Rating
4-000-035	8.4V/750mA Ni-MH



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