

# Drummond Scientific Company

Installation & Operation  
Manual for Model 300  
Catalog Number 4-000-300

## Hood Mate® Pipet-Aid®

**This equipment is for indoor use only.**  
(Maximum temperature 35°C, Maximum Humidity 60%)

### Specifications

Rating	120 Volts, 60 Hz AC Installation Category II Pollution Degree One
Input	6.3 VA
Pipet Capacity	Any pipet with a mouth piece diameter 3 mm to 10 mm
Maximum Fill Rate	10 mL/sec

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

Made in USA

By



**DRUMMOND**  
SCIENTIFIC COMPANY

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# Table of Contents

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- 1) Product Specifications
- 2) Table of Contents
- 3) Rules for Safe Operation
- 4) Installation
- 5) Operation
- 6) Maintenance
- 7) Parts/Service

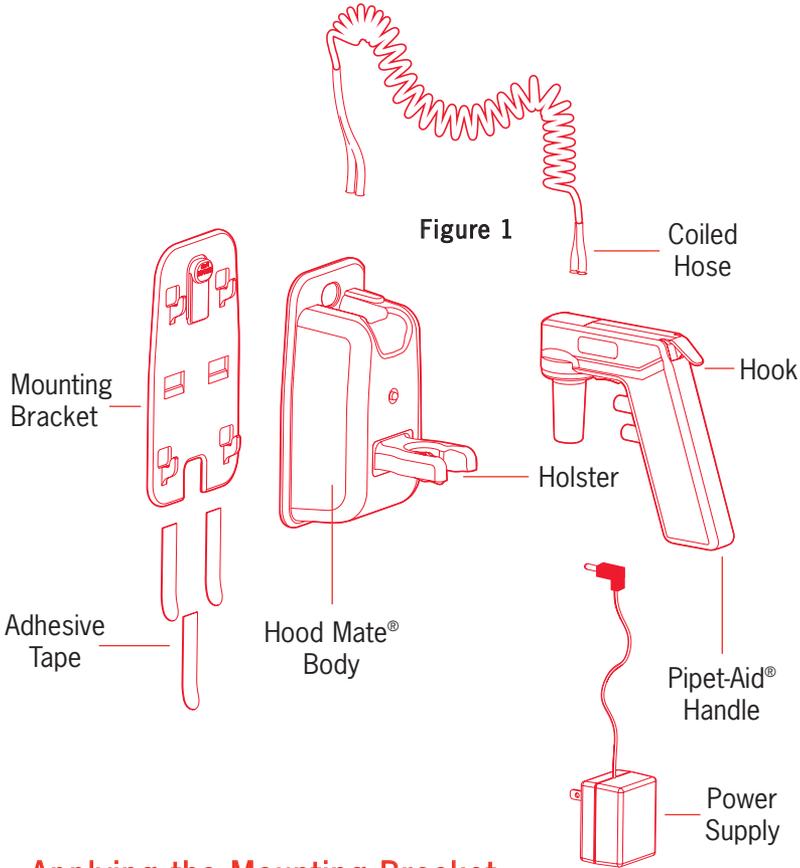
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## Rules for Safe Operation

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- For Indoor use only.
- Never operate unit in an explosive atmosphere.  
The pump motor generates sparks.
- Use extreme caution loading a glass pipet into Pipet-Aid®.
- 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.
- Do not handle power supply with wet hands.
- PIPETTING ACIDS OR STRONG ALKALIS WILL DAMAGE UNIT.
- When servicing, use only identical Drummond replacement parts.
- Save these instructions.

# INSTALLATION



## Applying the Mounting Bracket

Determine a suitable area to place the mounting bracket and clean the surface with isopropyl alcohol. On the back of the mounting bracket there are three adhesive strips, pull the black removal tabs off these strips and press the mounting bracket firmly in place for thirty (30) seconds.

This Side to Hood



Figure 2

## Removing the Mounting Bracket

To remove the mounting bracket from the inside of the hood, gently pull the removal tabs straight down until the bracket releases from inside the hood.

## Connecting the Power Supply

Use only the power supply that is supplied with the unit. Insert connector into the socket in the rear of the Hood Mate body (Figure 3). Excess cord may be wrapped around the three hooks. Run the wire through the wire guide.

## Attaching Hood Mate® to the Mounting Bracket

Attach the Hood Mate to the mounting bracket by aligning the slots of the Hood Mate with the hooks of the mounting bracket. Once the slots and hooks are aligned, slide the Hood Mate on and gently pull down until it clicks into place. Plug power supply into the outlet.

## To Release Housing from Mounting Bracket

On the front of the mounting bracket there is a pump housing release button. This button enables the Hood Mate to be removed from the bracket for cleaning and other purposes. To reinstall the Hood Mate simply slide it on and gently pull down until it clicks into place.

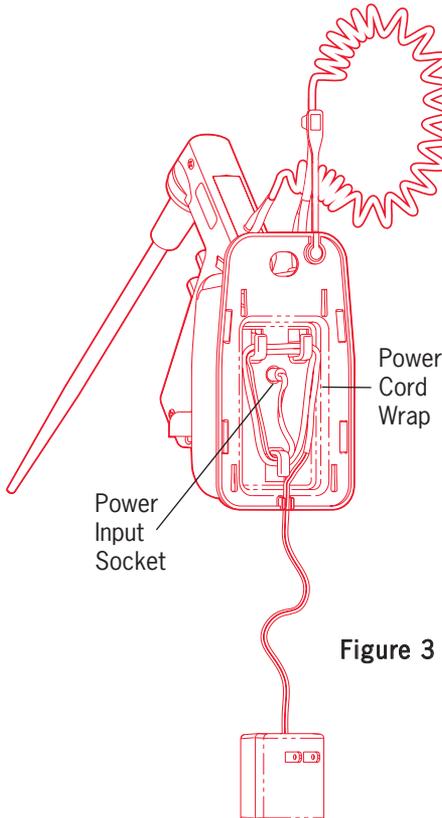


Figure 3

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# Operation

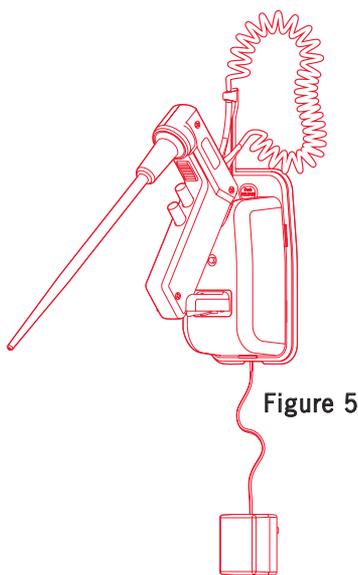
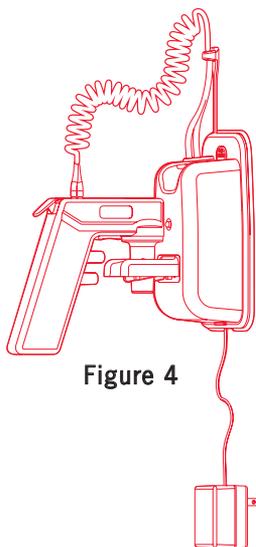
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## Parking the Handle

The Handle can be “parked” on the Hood Mate body two ways as shown in Figure 4 and Figure 5. Parking the handle by the hook allows the handle to be stored with a pipet in it. When the handle is in either park position, the pump will shut off.

## Activation of Hood Mate®

Removing the handle from the parked position turns on the pump and the RED indicator light. If the handle is not parked and has not been used for pipetting, the Hood Mate will shut itself off in three (3) minutes. Depressing the semi-circular button on the top of the holster can reactivate it.



## Speed Control

Each button has three speed ranges:

“F” Fast

“M” Medium

“S” Slow

The speed is selected by rotating the button on its axis until it snaps in place. (The speed chosen is visible when the handle is held in the right hand). These controls are independent of each other so one could fill fast and dispense slow. CHANGE SPEED WITH PIPET EMPTY. CHANGING SPEED WITH FLUID IN PIPET WILL RESULT IN LEAKAGE.

## Tissue Culture Filter\*

A two-layered membrane filter is located in the nosepiece. If an accidental overfilling of the pipet is encountered the wetted filter will prevent air movement in either direction thus shutting down pipetting operations. The wetted parts should be cleaned and the filter must be replaced with a Drummond replacement filter.

## Replacing TC Filter

Slide the **Nosepiece Release** toward the control buttons and twist the nosepiece to release it from the handle. Remove the two gaskets from the old filter and place them on the new filter. Place the filter and gasket assembly into the nosepiece and lock into handle with a twisting motion.

## Cleaning Hood Mate®

Check the rubber insert for blockage. Drummond **does not use cotton**. If cotton gets into the rubber insert unit will not operate properly.

Unit may be wiped down with an alcohol solution or soap and water.

**CAUTION: REMOVE POWER SUPPLY FROM OUTLET.**

## Equipment Maintenance

Inspect interior of rubber insert for broken rings. Broken or worn rings may cause a reduction in vacuum and pressure, which will result in leakage from the pipet. Replace as necessary.

*Inspect the coiled hose for cracks or other damage.*

Two rubber gaskets are attached to the TC Filter. Unit will not function if either one is missing.

Inspect Nosepiece for wear. If the nosepiece is removed without using the nosepiece release it will damage nosepiece, resulting in a loss of vacuum and pressure. Check the three protrusions on nosepiece for wear.

***\*Why Use a Drummond Self-Locking Filter in Your Pipet-Aid.***

In order to provide a fail-safe, one-time check valve for Pipet-Aid pipettors, Drummond pioneered the use of a "self-locking" dual layer filter composed of one hydrophobic membrane and one hydrophilic membrane located in the nosepiece. With a dual layer membrane, when the filter is challenged with an aqueous solution, the hydrophobic layer prevents liquid from entering the handle and the wetted hydrophilic layer restricts the flow of air which locks the Pipet-Aid from further use. When this occurs, the user must replace the filter and clean the other wetted parts, thus protecting the Pipet-Aid as well as the integrity of subsequent dispensing.

The specifications for the Drummond filter are .45 µm for the hydrophilic layer and .8 µm for the hydrophobic layer. Most competitive pipetting units use a single layer hydrophobic membrane with ratings of either .22 µm or .45 µm. These filters protect the handle only. If challenged with an aqueous solution, the filter will prevent the liquid from entering the handle; however, it can be subsequently blown out and pipetting can be continued. This action creates an aerosol generator just above the pipet and all subsequent dispensing are at risk of being contaminated. While the user may think he or she is sterilizing the air entering the pipet, they are in fact introducing contamination.

The most effective safety measure to prevent contamination is the cotton or fiber plug in each pipet. Even if a sterile filter is installed in a Pipet-Aid, the first time an aerosol comes in contact with the bottom membrane, the filter is rendered forever nonsterile. The only thing that prevents this from happening is the plug in the pipet itself, which prevents aerosols from leaving the pipet and prevents them from entering. Drummond “self-locking” TC filters are supplied nonsterile because we believe there is no effective and practical method to maintain sterility in these devices.

## Service

Drummond Scientific Company supplies a one year warranty on all Pipet-Aid Products. Spare parts can be ordered from your favorite laboratory supply firm, or by calling our toll-free number 1-800/523-7480.

If you have any questions or you need assistance our service department is available Monday through Friday, from 8:30 AM to 4:30 PM EST.

## Replacement Parts

<b>Cat. No.</b>	<b>Description</b>
4-000-002.....	Rubber Insert (2/Pk)
4-000-051.....	Replacement Filters (5/Pk)
4-000-057.....	TC Gasket (Pair)
4-000-079.....	Nosepiece (Black)
4-000-080.....	Power Supply, 110 V
4-000-082.....	Backing Plate
4-000-083.....	Replacement Tape
4-000-084.....	Valve Body Assembly
4-000-085.....	Coiled Hose
4-000-086.....	Hose Support
4-000-087.....	Nosepiece Kit (1 black nosepiece, 4 filters, TC gasket/pair, & rubber insert)

Model # \_\_\_\_\_

Serial # \_\_\_\_\_



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