Labnet P2000 FastPette V2 Pipet Controller Instruction Manual

Labnet FastPette V2
Instruction Manual
Catalog Number: P2000

CE

Contents

P2000 FastPette V2 Pipet Controller

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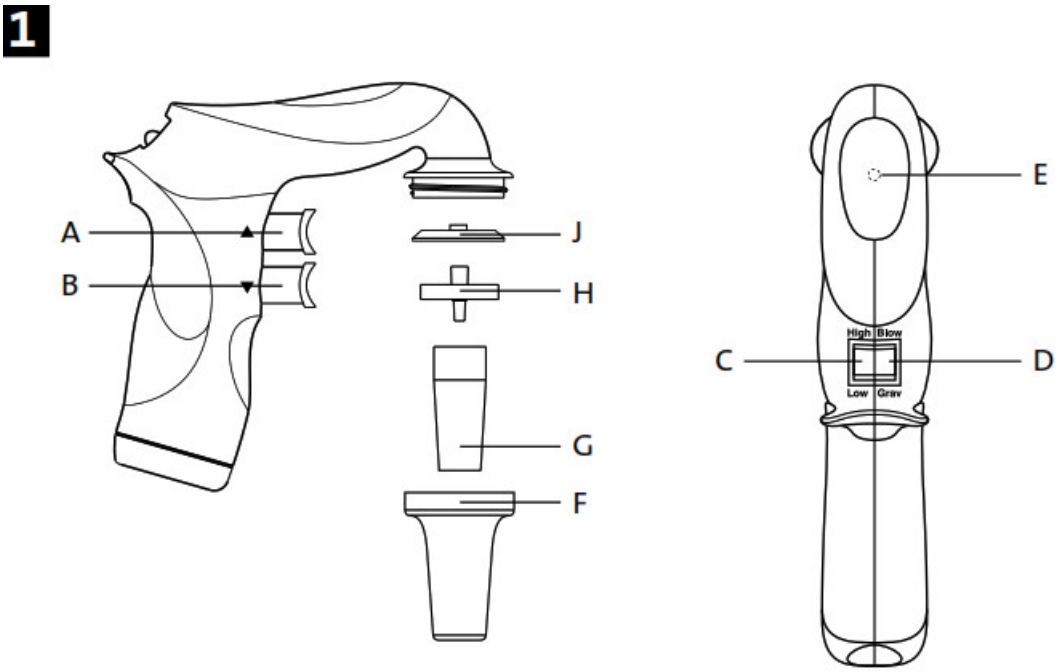

A – Aspiration button – PP B – Dispense button – PP C – Suction speed switch – PP D – Dispense mode switch – PP E – Indicator F – Nose piece – PP G – Pipet holder – SI H – Membrane filter – PP/PTFE J – Connector gasket – SI	M – Bench stand N – Charger 9V: EU, US, UK, AU **INPUT:** 100-240V, 50/60Hz, 0.3A **OUTPUT:** DC 9V, 230mA P – Wall mount – PP PP: Polypropylene PTFE: Polytetrafluoroethylene SI: Silicone Casing – PP

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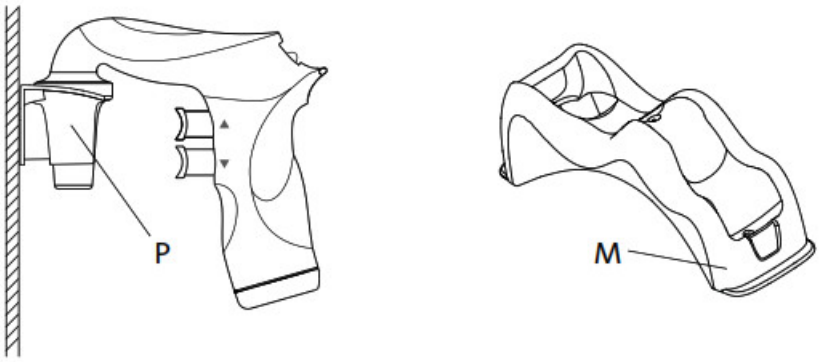
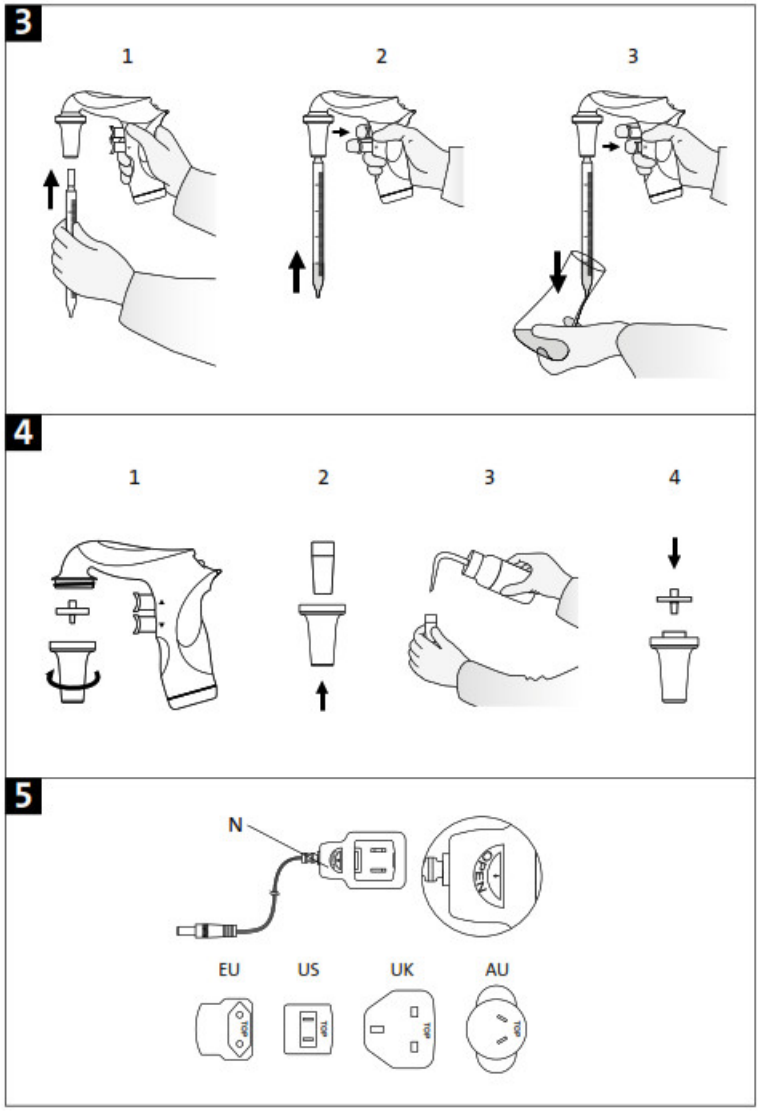


LABNET FASTPETTE V2 PIPET CONTROLLER



Introduction

The pipet controller is a device intended for general laboratory use only, for pipetting liquids with the use of measuring pipets. It can work with all types of glass or plastic
pipets in the volume range from 0.5 mL to 100 mL. Two dispense modes permit selection of dispensing intensity depending on the user's needs (Figure 1D). The FastPette V-2 features a two speed control system which enables very fast dispensing of large volumes and precise measuring of small volumes. Figure 1 shows the external parts of the pipet controller with a description of the materials used.

Work Safety Instructions

⚠ **WARNING!** Risk of injury
CAUTION: Risk of damage to the device or errors in pipetting of liquids.
Before starting the work with the pipet controller every user should read these operating instructions carefully.
CAUTION:

- Using the device inconsistently with the operating instructions may result in damaging the device.
- The device should be serviced only at an authorized service center, otherwise the manufacturer will be relieved from any liability under the warranty.
- Only original spare parts and accessories, recommended by the manufacturer, shall be used.
- Only the original charger, supplied by the manufacturer, shall be used for charging the batteries.

- In case of incorrect functioning of the pipet controller, work shall be stopped.
  The device shall be cleaned according to section 9 and sent for repair to an authorized service center.
- In the case of mechanical damage to the casing, the device shall be immediately sent for repair to an authorized service center.
- The use of excessive force during work shall be avoided.

⚠ **WARNING!**

- During the work with the pipet controller general safety regulations regarding risks related with laboratory work should be observed. Protective clothing, goggles, and
  gloves should be worn.
- The pipet controller shall be used only for measuring liquids in conditions specified by the manufacturer, which are limited due to the chemical and mechanical
  resistance of the device, as well as the user safety.
- The information and instructions provided by the manufacturers of the reagents must be observed.
  NOTE: The pipet controller is equipped with liquid vapors exhaustion system which protects against corrosion to ensure long instrument life.

Limitations of Use

- The pipet controller shall not be used for measuring substances with vapours of which damage the following plastics: PP, SI, EPDM, POM.
- The pipet controller shall not be used in an environment where explosion risk is present.
- Flammable liquids shall not be measured – in particular substances with flash-point below 0°C (ether, acetone).
- The pipet controller shall not be used for drawing acids with a concentration above 1 mol/L.
- The pipet controller shall not be used for drawing solutions with a temperature above 50°C.
- The pipet controller may work in temperature range from +10°C to +35°C.
  The pipet controller is suitable for general laboratory use only. It must be used only by personnel who know the health risks associated with the substances that are
  normally used with this instrument.

Switching On

The pipet controller is switched on by pressing the trigger buttons (Figure 1A, B, C, D).
Charge the batteries before the first use. When the pipet controller starts working very slowly it means that the batteries needs to be recharged. Alternatively, the pipet
controller can be used while charging. The LED indicator lights when the charger is connected. Full charging cycle takes at least 11 hours.

- The pipet controller may be charged only with the original charger.
- The mains voltage shall conform with the specification on the charger.
- Charging shall be done in accordance with section 8 of the instruction manual.

Aspirating and Dispensing Liquids

Attaching a pipet

CAUTION: Before attaching a pipet, check whether the pipet is not damaged, has no dents or sharp edges in the gripping part. Check whether the gripping part is dry.

The pipet shall be gripped as close to the upper end as possible and carefully inserted into the pipet holder until resistance is noticed (Figure 3.1).

⚠ **WARNING!**

Do not apply excessive force so as not to damage thin pipets and avoid risk of injury. A pipet that has been correctly attached and sealed in the holder should not tilt to the sides. After attaching a pipet, hold the pipet controller in a vertical position. It is not recommended to leave the device with a pipet attached for a longer period, for example overnight or over a weekend.

CAUTION: Do not put aside the pipet controller if there is liquid in the pipet.

Filling the pipet

Before aspirating is started, set the speed by using the SPEED switch (Figure 1C).

- HIGH speed – fast aspirating,
- LOW speed – slow aspirating.

It is recommended to set the LOW speed when working with pipets of volumes up to 5 mL, and the HIGH speed for pipets of volumes greater than 5 mL. Holding the pipet
controller in a vertical position, immerse the pipet end in the liquid to be drawn up (Figure 3.2), and press the aspiration button gently. The speed depends on how deep the aspirating button has been pressed. The deeper the button is pressed the faster the liquid is aspirated into the pipet.

It is recommended to draw a slightly greater liquid volume than required (due to meniscus above the required volume mark), adjusting the aspiration speed, so as not to overfill the pipet.

Setting the volume

After the pipet is filled, dry the outside surface with absorbent paper that does not leave impurities. Then set the required liquid volume precisely. Pressing the dispense button gently (Figure 3.3), dispense the excessive liquid from the pipet until the meniscus of the liquid aligns exactly with the required volume mark on the pipet.

Emptying the pipet

Holding the vessel in an inclined position, place the pipet end in contact with the vessel wall and press the dispense button gently (Figure 3.3). The dispensing intensity
may be adjusted depending on how deep the dispense button has been pressed. The deeper the button is pressed the faster the outflow of liquid from the pipet.

The pipet controller has two dispense modes. The dispense mode is selected by using the MODE switch (Figure 1D).

- Gravity mode – dispensing is effected in gravity mode, which means that the liquid flows out of the pipet by its own weight.
- Blow out mode – dispensing is effected in gravity mode, however, when the dispense button is pressed to the middle position, the pump is started and fast emptying of the pipet with a blow out is effected.

CAUTION: During gravimetrical dispensing the pipet is not completely emptied due to the characteristics of pipets used with the pipet controller.

Troubleshooting

If during your work the pipet controller is not functioning correctly, check the cause and correct the fault.

Problem	Possible Cause	Action
The pipet falls out (the holding force of the pipet is too small), or tilts to the sid e too much.	The pipet holder (Figure 1G) is d irty or wet.	Take out the pipet holder, and clean , wash, and dry it.
	The pipet holder is damaged.	Replace the pipet holder with a new one.
The pump is working, but the pipet co ntroller aid does not draw liquid or draws liqui d very slowly.	The filter (Figure 1H) is dirty.	Take out the pipet holder, take out t he filter; if it is dirty, replace it with a new one.
	The pipet holder and/or the conn ector gasket (Figure 1J) is dama ged.	Replace the mechanically damaged elements with new ones.
Liquid leaks from the pipet (the aspirat ion and the dispense buttons are not pres sed).	The pipet is damaged.	Check the pipet for damage (cracks , dents); if present, replace the pipet with a new one.
	The pipet is inserted incorrectly.	Check whether the pipet has been correctly inserted in the pipet holder.
	The pipet holder, the filter, or the connector gasket is installed inc orrectly.	Check whether all parts are present and correctly installed.
	The pipet holder and/or the conn ector gasket is damaged (Figures 1G, 1J).	Replace the mechanically damaged elements with new ones.

If the above actions do not help, the device shall be sent to the nearest authorized service center. Before being serviced, the pipet controller should be cleaned and decontaminated. Written details including the precise specification of solutions used and the type of laboratory in which the device was used, should be sent with the product.

Replacing the Filter

CAUTION: The work safety instructions given in section 2 shall be observed when disassembling the pipet controller.
The filter replacement is necessary, if drawing efficiency deterioration is observed.
The direct reason may be a dirty filter after a long period of use. In order to replace the filter:

- Remove the pipet.
- Unscrew the nose piece (Figure 4.1).
- Remove the membrane filter (Figure 4.1) and the pipet holder (Figure 4.2).
- Rinse the holder using a wash bottle (Figure 4.3).
- Blow liquid out of the holder and set it aside until it is completely dry.
- Install new membrane filter (Figure 4.4) and assemble the device in reverse order.

Charging the Batteries

CAUTION: The pipet controller may be charged only with the original charger. The mains voltage shall conform with the specification on the charger (Input: 100-240V,

50/60Hz, 0.2A; output: DC 9V).
Using chargers other than the original one may damage the battery.
The pipet controller is powered by a NiMH type battery.

Charging

1. Charging temperature: 10°C to 55°C.
2. Charging the battery is carried out through a charger (power supply) by direct connection to the main power. Batteries charging is indicated by LED light indicator.
3. Full charging time: 11 to 14 hours.

When the batteries are charged, the charging circuit disconnects automatically.
The service life of the batteries: approx. 1,000 charging cycles, if used correctly. It is not possible to overcharge the batteries if all instructions of the manufacturer are followed.

⚠ **WARNING!**
In order to prolong the life span of the rechargeable batteries, the following rules should be followed:

1. Before the pipet controller is activated for the first time, the batteries should be charged.
2. If the pipet controller starts to indicate low battery level during work, connect it to the charger to continue working.
3. Do not leave the pipet controller discharged for a long period of time.

Maintenance

Cleaning
The pipet controller does not require any maintenance. Its external parts may be cleaned with a swab moistened with isopropyl alcohol.
The nose piece and the pipet holder may be autoclaved at 121°C for 20 minutes.
After autoclaving, dry the pipet holder. The filter included in the set may be sterilized by autoclaving at 121°C for not more than 15 minutes.

Ultra violet (UV) sterilization
The outer body of the pipet controller is UV resistant, which was confirmed by many tests. The recommended distance from the radiation source to exposed element should be not less than 50 cm.
Prolonged and very intense UV exposure can cause de-coloration of pipet controller parts, without affecting its performance.

Storage
The pipet controller should be stored in a dry place. The allowable storage temperature: -20°C to +50°C.
During breaks in the work the pipet controller can be stored on the wall hanger or bench stand.
CAUTION: Do not store the pipet controller with a filled pipet.

Components

The pipet controller set is supplied with the following components:

- Universal charger with set of adapters
- PTFE filter 0.2 µm
- Instruction manual
- Bench stand
- QC certificate

Ordering Information

The Labnet FastPette V2 Pipet Controller comes with a universal charger and a set of adapters in different versions: EU, US, UK, and AU. Choose your country's adapter and
connect to the housing.
To mount the adapter, it should be inserted into the slots of the housing (Figure 5N) in the direction of the arrow, until you hear a click.
To remove or change the adapter, simply press the "PUSH" button in the direction of the arrow, hold the button down, remove the adapter in the direction of the arrow.

Spare Parts

Item in Fiure 1	Description	Cat. No.	Oty/Pk
F	Nose piece	SP9022	1
G	Silicone pipet holder	SP29054	1
H	PTFE filter 0.2 p.m	SP9143	5
	PTFE filter 0.45 pm	SP9144	5
M	Bench stand	SP19030	1
N	Universal charger, 9V with set of adapters: EU, US , UK, AU	SP29100	1
P	Wall mount	SP9029	1

Limited Warranty

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For your reference, make a note of the serial and model number, date of purchase, and supplier here.
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Date Purchased……
Model No……
Supplier……..

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According to Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE), this product is marked with the crossed-out wheeled bin and must not be disposed of with domestic waste.
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Documents / Resources

	**Labnet P2000 FastPette V2 Pipet Controller** [pdf] Instruction Manual P2000 FastPette V2 Pipet Controller, P2000, FastPette V2 Pipet Controller, Pipet Controller, Controller

References

- Legal Notices | Corning.com
- Life Sciences Products | Corning
- WEEE Information For Corning Customers And Recyclers | Corning
- Labnet |