@Pette Pro NW

SAFETY NOTICE: If this product is not used in accordance with the instructions in this manual, it will not receive the appropriate safety protection.

Users Guide

Contents

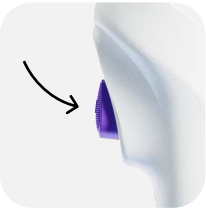
Search for chapters by page number on the left

Quick Start for @Pette Pro NW

Guidelines for the first use of the equipment

1 Light Up The Screen

Press and hold the trigger button for 3 seconds, the screen will light up after the "drop" sound to indicate that the power is on.



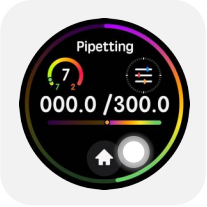
2 Select Language

This machine is available in Chinese and English.

3 Mode Menu

Tap the HOME button position on the Home screen to enter the Mode menu.

The Mode menu contains Pipetting, Dispensing, Diluting, Manual and Settings. Slide the screen to switch modes and tap the icon in the centre of the screen to enter a mode.



Click HOME

Slide The Centre Of The Screen

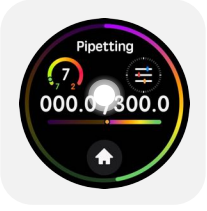
Click To Enter This Mode

4 Parameterisation

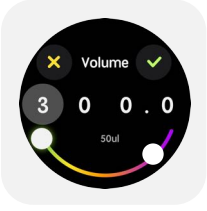
Tap anywhere on the main screen to access the parameter menu.
Take the volume setting as an example, slide the edge of the screen to adjust the size of the value.

Tips

Click on any digit of the parameter adjustment to adjust the number individually



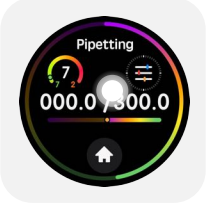
Pipetting



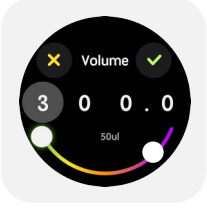
Slide The Edge Of The Screen

5 Quick Operation

Long press anywhere on the main screen to access the Quick Volume Adjustment.



Pipetting

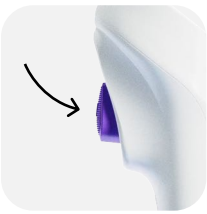


Slide The Edge Of The Screen

Common Operations

1 Inhalation/exhalation of fluids

In motorised mode, gently press the trigger button for suction/discharge operation.
In manual mode, press and hold the trigger key for suction/discharge operation.



2 Retractable Tips

When the liquid is empty, gently press the suction withdrawal button to electrically withdraw the tip.

3 Empty Liquids With One Click

When the suction operation has been performed, press and hold the desorption button to discharge the liquid with one touch.

Tips

This method of operation allows for greater freedom in dispensing.

4 Blowing Fluid

After completing the suction-discharge cycle, double-click the trigger button to blow fluid.

5 Mix

In motorised mode, with no liquid in the tip, press and hold the trigger button to mix.
Mixing is not supported in manual mode.

Equipment Function Introduction

Pipettes

Possibility to draw in liquid in pipetting mode and discharge the drawn-in liquid again

Dispensing

In the dispensing mode the liquid is inhaled and the inhaled liquid is discharged in batches with the same volume of liquid being discharged each time.

Diluting

Aspiration of two different liquids in a dilution liquid, which are separated by bubbles. The dilution mode is suitable for diluting samples or reagents with a suitable dilution liquid. The diluent is first aspirated, followed by the bubbles and finally the sample or reagent.

Manual

Use in manual pipetting mode is the same as for manual pipettes. The maximum pipetting volume can be set on demand. Pipetting can be stopped and continued at any time, or the direction can be changed.

Settings

Tap the System Settings button to enter the System Settings menu page. In the System Settings page, you can set the screen brightness, wireless connection, three-point calibration, language, and device password, as well as view the calibration log, local information, and turn off the power.

Pipetting Mode

How to use the pipetting mode

1 Enter Pipetting

Select Pipetting in the Mode menu to enter pipetting mode.

Mode Menu

Pipetting Mode

2 Parameterisation

Tap anywhere on the main screen to access the parameter menu.

Pipetting

3 Start Pipetting

Tap the trigger button to start suction/discharge operation

4 Retractable Tips

When the liquid is empty, gently press the suction withdrawal button to electrically withdraw the tip.

5 Blowing Fluid

After completing the suction-discharge cycle, double-click the trigger button to blow fluid.

6 Mix Well

With no liquid in the tip, press and hold the trigger button to mix.

Dispensing Mode

How to use the dispensing mode

1 Entering Dispensing Mode

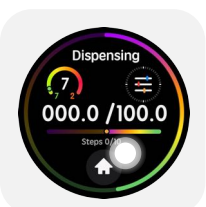
Select Dispense in the Mode menu to enter Dispense mode.

Mode Menu

Dispensing Mode

2 Parameterisation

Tap anywhere on the main screen to access the parameter menu.



Dispensing Mode

3 Start Dispensing

Tap the trigger to begin suction/discharge operation.

4 Empty Liquids With One Click

When the suction operation has been performed, press and hold the desorption button to discharge the liquid with one touch.

Tips

This method of operation allows for greater freedom in dispensing.

5 Retractable Tips

When the liquid is empty, gently press the suction withdrawal button to electrically withdraw the tip.

6 Blowing Fluid

After completing the suction-discharge cycle, double-click the trigger button to blow fluid.

7 Mix Well

With no liquid in the tip, press and hold the trigger button to mix.

Diluting Mode

How to use the Diluting mode

1 Entering Diluting Mode

Select Dilute in the Mode menu to enter Dilute mode.

Mode Menu

Dilution Model

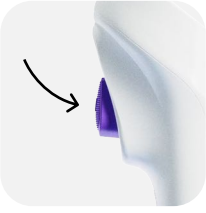
2 Parameterisation

Tap anywhere on the main screen to access the parameter menu.

Dilution Model

3 Start Dispensing

Tap the trigger to begin suction/discharge operation.



4 Empty Liquids With One Click

When the suction operation has been performed, press and hold the desorption button to discharge the liquid with one touch.

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6 Blowing Fluid

After completing the suction-discharge cycle, double-click the trigger button to blow fluid.

7 Mix Well

With no liquid in the tip, press and hold the trigger button to mix.

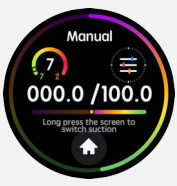
Manual Mode

How to use the Manual mode

1 Entering Manual Mode

Select Dilute in the Mode menu to enter Dilute mode.

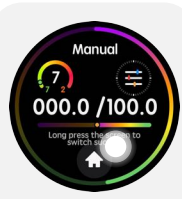
Mode Menu



Manual Model

2 Parameterisation

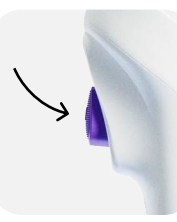
Tap anywhere on the main screen to access the parameter menu.



Manual Model

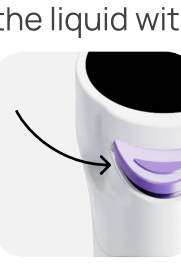
3 Start Pipetting

Press and hold the trigger to initiate suction/ discharge.



4 Empty Liquids With One Click

When the suction operation has been performed, press and hold the desorption button to discharge the liquid with one touch.

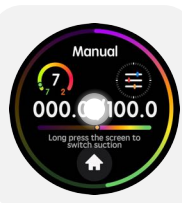


Tips

This method of operation allows for greater freedom in dispensing.

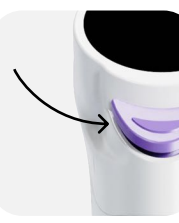
5 Switching Direction Of Suction And Discharge

Press and hold the centre of the screen to change the direction of suction.



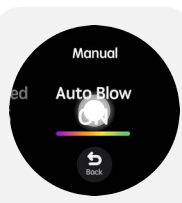
6 Retractable Tips

When the liquid is empty, gently press the suction withdrawal button to electrically withdraw the tip.



7 Blowing Fluid

Manual mode turns on the automatic liquid blowing function by default and does not support double-click blowing.

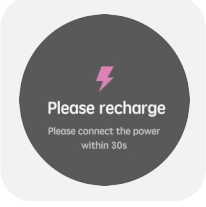


Charge The Device

How to charge your device

The @pette Pro NW can be plugged into the charger in any state and the pipette can be recharged from the mains, from a mobile power supply or by connecting it to a computer using the optional typec connector. While the device is charging, a charging indicator pops up on the display and the current state of charge is indicated by a percentage of charge in the centre of the page. 15 minutes later, the pipette will have enough charge for several hours of pipetting, and the battery will be fully charged in approximately 60 minutes, providing up to 3000 full cycles (relatively fewer when used in high volume models). When charging is complete, the battery value reaches 100%, indicating that the battery is fully charged. Battery power is depleted with continued use.

Charging Interface



About To Shut Down.

Pipetting While Charging

The @pette Pro NW can perform operations while charging, and while charging, touch the charging screen to go to the page where you stayed prior to the charging state. If you need to perform liquid handling tasks while charging, we recommend using the original charging device to power the pipette.

Memory System, Power And Management Settings

All user-entered changes to the @pette pro NW settings, as well as service mode data, are saved in flash memory. Therefore, the above will be saved in case of battery failure or removal.

Using Pipettes

Recommendations For Using

The Following Guidelines Should Be Followed For Pipette Use:

1. Set the volume to the range specified for the pipette and use a tip that matches the pipette.
2. To ensure accuracy, use high-quality tips made from non-contaminating materials.
3. Use a continuous immersion depth.
4. Pipette vertically or within 20 degrees of vertical.
5. Pre-rinsing (1-3 times) improves pipetting accuracy.
6. Never invert or lay the pipette flat with liquid in the tip. Always keep the instrument upright and store it as vertically as possible.
7. Liquid must not enter the accessible piston or the sealed casing handle and the electronics including the display, trigger and retractor keys.
8. Do not use aggressive solvents to clean the Smart Pipettes. For cleaning, it is best to use a cottonless rag moistened with water (or a diluted mild detergent if needed).
9. Ensure that the display, trigger and withdrawal keys are dry.

Tips

The @Pette Pro NW is a premium laboratory product and must be maintained with care, please standardize your handling.

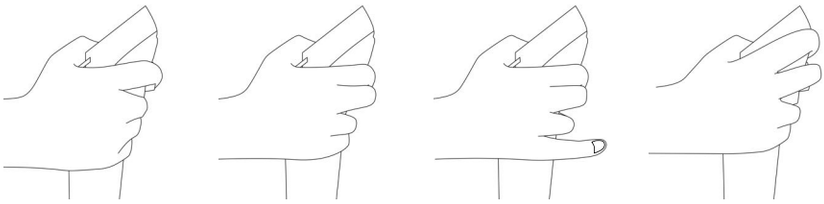
Depth Of Tip Wetting

The depth of tip wetting is critical. If the recommended depth is exceeded, the measurement may be inaccurate and out of standard. The angle of the tip is also important. The recommended tip insertion depths for each model are shown below:

Range	Measurement Range	Immersion Depth
10 µl	0.5-10 µl	1-2 mm
100 µl	5-100 µl	1-2 mm
300 µl	30-300 µl	1-2 mm
1000 µl	50-1000 µl	1-2 mm

Motion Of Hand

The @pette Pro NW does not restrict your holding position and you can choose any gesture you like to hold the pipette.



How To Disassemble ?

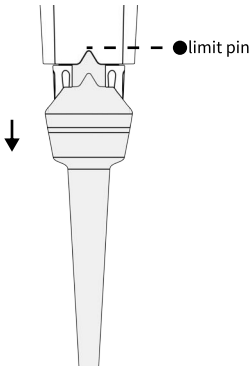
How To Use The Accessories

Tips

Follow the disassembly recommendations provided in this manual or you may damage the pipette.

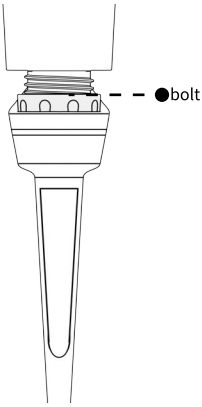
1 Pull Out Limit Pin

Pull the limit pin downward to disengage the limit pin from the upper limit hook.



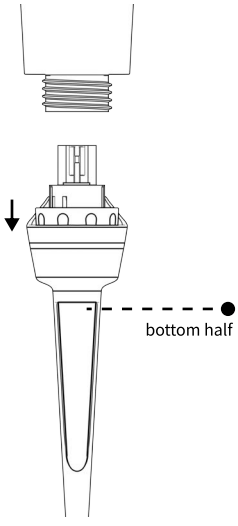
2 Unscrew The Connecting Bolts

Turn the attachment bolt counterclockwise until the bolt is fully disengaged from the upper half of the retaining threads.



3 Separate The Lower Half Of The Branch

Gently pull the lower part of the pipette downwards, allowing the internal magnetic connection to separate.



@Pette Pro NW Technical Parameters

@Pette Pro NW Technical Parameters

Technical Parameters	Single Channel Pipettes	Eight-Channel Pipettes
Design	Air Displacement	Air Displacement
Operating Method	Electric Powered	Electric Powered
Range	0.5-10μL | 5-100μL | 30-300μL | 50-1000μL	0.5-10μL | 5-100μL | 30-300μL | 50-1000μL
Number Of Channel	1	8
Colour Code	Yellow I Cyan I Purple I Green	Yellow I Cyan I Purple I Green
Nominal Volume	10μL | 100μL | 300μL | 1000μL	10μL | 100μL | 300μL | 1000μL
Minimum Capacity	0.5μL | 5μL | 30μL | 50μL	0.5μL | 5μL | 30μL | 50μL
Maximum Capacity	10μL | 100μL | 300μL | 1000μL	10μL | 100μL | 300μL | 1000μL
Accuracy Of Nominal Volume（μL）	±0.06ul I ±0.4ul I ±0.9ul I ±2ul	±0.08ul I ±0.5ul I ±1.2ul I ±2ul
Accuracy Of Nominal Volume（%）	±0.6% I ±0.4% I ±0.3% I ±0.2%	±0.8% I ±0.5% I ±0.4% I ±0.2%
Precision Of Nominal Volume（μL）	±0.05ul ±0.3ul I ±0.6ul I ±1ul	±0.06ul ±0.4ul I ±0.9ul I ±1ul
Precision Of Nominal Volume（%）	±0.5% I ±0.3% I ±0.2% I ±0.1%	±0.6% I ±0.4% I ±0.3% I ±0.1%
Factory Calibration Certificate	Yes	Yes
Removable	Yes	Yes
Can Be Sterilised In Half	Yes	Yes
Dimensions (mm)	45.66*56.86*242.4 45.66*56.86*243.43 45.66*56.86*242.03 45.66*56.86*243.22	87.6*58.2*261.9 87.6*58.2*264.2 87.6*58.2*264.2 88.1*58.2*268.9
Weight (G)	148.6g | 149.9g | 149.3g | 150.9g	233.66g | 231.57g | 230.44g | 276.43g

Fault Analysis

Initial identification of the cause of the fault

Issues	Possible Causes	Suggested Solutions
Leakage, Inaccuracy	Broken Seals Or O-Rings	Check if the piston seal is broken, if so, replace the piston seal. If using a 10/100μL pipette, additionally check that the O-rings are not broken, if they are, replace them.
	Insufficient Grease	Check the piston seal and apply a small amount of grease to assist in sealing.
	Deformed Or Mutilated Piston Cylinder Head	Check whether the head of the piston barrel is deformed due to long-term use, or the head is mutilated due to knocking, wear and corrosion. If any of the above conditions exist, the piston barrel needs to be replaced.
Rough, Uneven Or Sticky Pistons	Sample Spills Inside The Unit, Resulting In Staining Or Corrosion.	Remove the tip excluder then remove the piston barrel and inspect the piston. If the piston is corroded or contaminated, replace the piston with a new one.
The Tip Pusher Cannot Be Reset After Being Pushed Out	System Failure Or Spring Failure	Contact the after-sales service for inspection and, if necessary, disassemble the machine to replace the tip pusher reset spring.
Screen Touch Malfunction	System Malfunction. Dropping, Impacting, Which May Result In Plug Disconnection Or Damage To The Screen Module	Contact after-sales service to dismantle the machine for inspection, and the screen module may need to be replaced if necessary.
Button Failure	System Malfunction. Violent Pressing Of The Suction And Discharge Buttons May Cause The Buttons To Become Inoperative.	Contact the after-sales service to dismantle the machine for inspection, if necessary, it may be necessary to replace the buttons or fix the structural parts.

Technical Parameters And Maintenance

Product Test Report

Names And Contents Of Hazardous Substances In Products

Part	Harmful Substance					
	Pb	Hg	Cd	Cr^{6+}	PBB	PBDE
Circuit Board	○	○	○	○	○	○
Electrical Machinery	○	○	○	○	○	○
Display Screen	×	○	○	○	○	○
Battery Pack	×	○	○	○	○	○
Power Adapter	○	○	○	○	○	○
Data Cable	○	○	○	○	○	○

This table is compiled according to the provisions of SJ/T 11364
○ : Indicates that the content of the hazardous substance in all homogeneous materials of the part is below the limit requirements specified in GB/T 39560.
× : Indicates that the content of the hazardous substance in at least one homogeneous material of the part is within the limits specified in GB/T 39560. Parts marked with "×" cannot be substituted for hazardous substances due to the limitation of the technological development level of the industry.

The numbers in this logo indicate that the product is environmentally friendly for a period of 10 years under normal use.

This product and some of its internal or external components may bear environmental end-of-life markings. Depending on the component and component manufacturer, the use-by date markings on the product and its components may vary. The expiration date markings on components take precedence over any conflicting or different environmental expiration date markings on the product.

Replacement Of Accessories

Service, calibration and repair

It is recommended that only genuine factory replacement parts, such as seals, O-rings, and shanks, be used. It is not necessary to recalibrate the pipette after changing the seals, O-rings and shanks. Recalibration of the pipette is only necessary when replacing the piston and should only be done by qualified, factory-trained personnel from a facility approved by Hangzhou ShuyeTechnology Co.
Please note: For pipettes under warranty, the warranty is void if the pipette has been damaged due to physical or chemical abuse, or if the pipette has been repaired or recalibrated by any service facility not authorised by Hangzhou ShuyeTechnology Co.
The service number for China is 0571-88767926. You can also get service outside of China.
Please visit https://www.vecverse.com/

Parts Replacement Chart

@Pette Pro NW Single Channel Pipettes			
Model	Seals	O-Ring	Piston Cylinder
10 Ml	61110	1010	70010
100 Ml	3216	5010G	70100
300 Ml	5320	-	70300
1000 Ml	9322	-	71000

@Pette Pro NW Eight-Channel Pipettes			
Model	Seals	O-Ring	Piston Cylinder
10 Ml	61110	-	80010
100 Ml	3216	5010F	80100
300 Ml	5320	5010F	80300
1000 Ml	9366	6510F	81000

Common Problems 1

Q&A | Technology Related

A What Is "Taylor" Self-Calibration?

Q It is the innovative self-calibration technology of the PetteOS system, supported by both hardware and software. With the built-in calibration components in the gun body of the @Pette Pro NW, it works with PetteOS to achieve automatic calibration after each pipetting operation, without external intervention. Like a Taylor expansion, the periodic calibration is spread out over each pipetting operation, enabling fully automatic calibration for each pipette.

A Why Is There No Shortcut Key For Switching Off The Computer?

Q @Pette Pro NW are equipped with a self-shutdown function for long periods of inactivity (15 min) and have a powerful battery life and fast charging, so you don't need to switch them off after pipetting.

A How To Check The Remaining Power?

Q The start of the pipetting screen and the aperture on the dial when the charger is plugged in indicate the remaining charge.

A What Causes The Occasional Residue After Draining?

Q Due to the influence of liquid surface tension, viscosity and suction tip adsorption, etc., when suction and drainage are performed, residues may occur. With this in mind, we have designed a liquid blowing programme, which allows you to carry out the blowing operation according to your actual needs.

A What Is The Reason Why The Tip Won't Back Out?

Q The @Pette Pro NW features universal tip technology with excellent adaptability, and motorised tip ejection, supported by both software and hardware. Currently, there are many different types of tips on the market with a wide variety of techniques. When matching tips with an inconspicuous limit, if you use too much force, the front branch of the pipette will go deeper into the tip in the past, making it difficult to withdraw the gun. It is recommended to use appropriate force and standardised handling to access the tips.

A What Should I Do If There Is A Suspension During The Dispensing Operation?

Q Due to the surface tension of liquids, when dispensing a small volume of solution, there may be a drop of suspension after each dispensing operation. We have also conducted rigorous tests to determine whether this drop of suspension should be added to the current discharge or to the next discharge. If this occurs, it is recommended that you gently touch the surface of the liquid or the wall of the tube to allow the suspension to drop into the current row.

A Do I Need To Calibrate My Pipettes Regularly?

Q The @Pette Pro NW features an innovative self-calibration system that automatically resets itself after each pipetting operation, and each pipette is reliably calibrated at the factory with a calibration report, so theoretically there is no need for recalibration. However, how often the pipette is used, the type of liquid handled, and the way the user uses the pipette all affect the calibration. To ensure that your pipettes are highly accurate, it is recommended that you calibrate them once a year using the system's own calibration system, a calibration demonstration video of which can be viewed on the website. If you have any questions, please do not hesitate to contact us!

A Why Can't I Just Back Off The Pipette Tip When There Is Liquid That Has Not Been Emptied?

Q The standard pipetting operation requires that the pipette tip be disposed of after draining the liquid. Considering the needs of practical scenarios, we have also thoughtfully designed a locking programme that helps you to carry out the standard operation easily on the one hand, and prevents the loss of samples due to mistakes on the other hand.

A How To Sterilise Pipettes?

Q The only high-pressure resistant heated part of @Pette Pro NW is the removable lower part. Sterilise at 121°C for 15-20 minutes. Do not autoclave the complete pipette or any parts other than the handle and tip extractor. In addition, the entire pipette is alcohol swabbed and UV sterilised.
* UV sterilisation is only possible on the surface of the pipette, the interior cannot be sterilised.

A What Kind Of Tip Do I Need To Choose?

Q A pipetting system consists of a pipette and a pipette tip, and the quality of the tip has an important influence on the accuracy of the pipetting. @Pette Pro NW use universal tip technology and have excellent adaptability. It is recommended that you use non-polluting, low-absorbent, high-quality tips according to your experimental scenario to achieve more accurate pipetting.

Common Problems 2

Q&A | Principles and Applications

A How The @Pette Pro NW Works

Q - @Pette Pro NW is the latest generation of pipettes that further revolutionises the experience of using electric pipettes by adding intelligent connectivity.
- With the built- in pipetting system software, the @Pette Pro NW interacts seamlessly and efficiently with the user. With different driving algorithms, the internal high segmentation motor is driven to perform high precision operations such as aspiration, drainage, dispensing, mixing, titration, tip draining, etc., which enhances the experience of using the pipette, improves work efficiency, and reduces strain on the workplace. In addition, due to the motor drive, the pipetting and mixing speeds are highly controllable and can be customised to meet the individual needs of different experimental protocols.
- The @Pette Pro NW can also be interconnected with external components via a wireless connection or wired interface to extend its functionality to include, for example, automated pipetting workstations and pipetting tablet kits. They can also be connected to the smart network for code registration, calibration information and log export/view.

A What Are The Scenarios In Which @Pette Pro NW Is Used?

Q Pipettes are commonly used in the life sciences, biomedicine, chemical analysis and other fields to accurately dispense and transfer minute amounts of sample liquid. In the laboratory, pipettes are widely used in PCR reactions, protein analysis, cell culture, genetic engineering and high-throughput screening, from sample preparation to sample analysis.

Common Problems 3

Q&A | After-Sales Service

A Can I Request An Official Recalibration Of My Pipette After Purchase?

Q We are happy to offer different calibration services to calibrate your pipettes according to standards. You can get in touch with our service team for any questions you may have by contacting us at

Email: service@vecverse.com

A What Is The Warranty Period For The @Pette Pro NW?

Q For any quality issues within 2 years, the return courier cost for repair is fully covered, *except for the charging cable and charger. For pipettes under warranty, the warranty is voided if the pipette has been damaged due to physical or chemical abuse, or if the pipette has been repaired or recalibrated by any service facility that is not authorized by Hangzhou Shuye Technology Co.

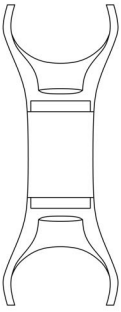
A Any Further Questions, Be Sure To Contact Us And We'll Be Happy To Answer Them.

Q Service number in China: 0571-88767926. You can also get service outside of China.

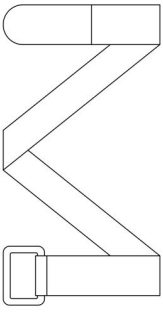
Please visit https://www.vecverse.com/

How Do I Use The Charging Hanger And Harness?

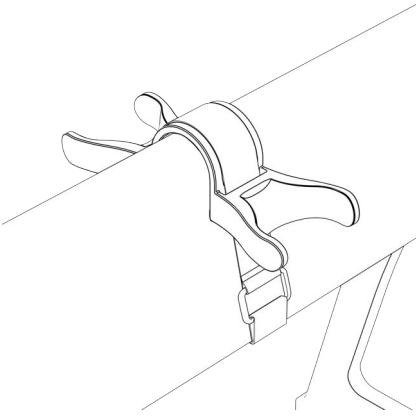
How To Use The Accessories

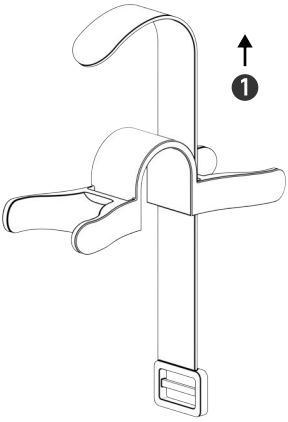


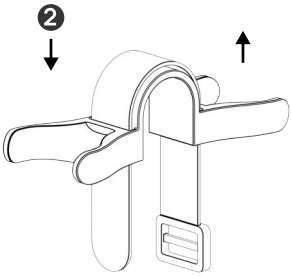
Pipette Hangers

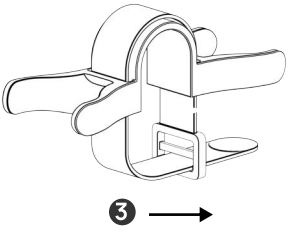


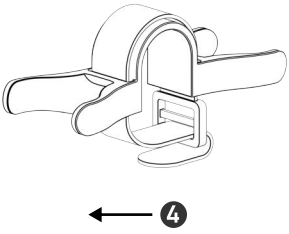
Hanger Strap











How To Find Us

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Shuye

Or Contact Us Directly

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